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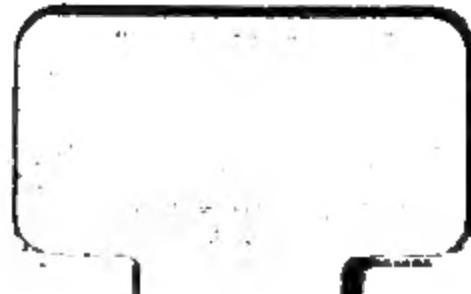
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Edmund Sheppard.

HORTUS ANGLICUS;

OR, THE

MODERN ENGLISH GARDEN:

CONTAINING

A FAMILIAR DESCRIPTION

OF ALL THE PLANTS WHICH ARE CULTIVATED IN THE CLIMATE
OF GREAT BRITAIN, EITHER FOR USE OR ORNAMENT,

AND OF

A SELECTION

FROM THE ESTABLISHED FAVOURITES OF THE

Stove and Green-house;

ARRANGED

ACCORDING TO THE SYSTEM OF LINNÆUS;

WITH

REMARKS

ON THE PROPERTIES OF THE MORE VALUABLE SPECIES.

BY THE

AUTHOR OF "THE BRITISH BOTANIST."

Stephen Clarke.

Blossoms and fruits at once of golden hue
Appear'd, with gay enamel'd colours mix'd.

MILTON.

IN TWO VOLUMES.

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HORTUS ANGLICUS.

CLASS XIII.

POLYANDRIA.

Order Monogynia.

1. Flowers four-petaled.

I. PAPAVER. Calyx of two leaves ; corolla of four petals ; capsule superior, of one cell opening by pores under the permanent radiated stigma.

II. CHELIDONIUM. Calyx of two leaves ; corolla of four petals ; capsule one celled, linear, resembling a silique ; seeds numerous, crested.

III. GLAUCIUM. Calyx of two leaves ; corolla of four petals ; capsule two celled, linear, resembling a silique ; seeds numerous, dotted.

IV. CAPPARIS. Calyx four leaved, leathery ; corolla of four petals ; stamens long ; pericarp either a berry or silique, fleshy, one celled, stalked.

v. ACTEA. Calyx four leaved; corolla of four petals; berry one celled; seeds roundish, lying over each other in two rows.

2. Flowers five-petaled.

vi. CISTUS. Calyx five leaved, two of the leaflets smaller; corolla five petaled; capsule superior, angular, many seeded.

vii. SARRACENIA. Calyx double, the outer of three leaves, the inner of five; corolla five petaled; capsule superior, of five cells; style with a shield-like stigma.

viii. TILIA. Calyx in five deep segments, deciduous; corolla five petaled; capsule superior, roundish, angular, of five cells, and five valves; seeds solitary.

Daphne, consolida, ajacis, aconiti.

3. Flowers six-petaled.

ix. ARGEMONE. Calyx three leaved; corolla six petaled; capsule half valved.

x. THEA. Calyx in five deep rounded segments; corolla in six or more deep segments; capsule three berried, superior.

4. Flowers eight-petaled.

xi. SANGUINARIA. Calyx of two leaves; corolla of eight petals; silique ovate, one celled.

5. *Flowers nine-petaled.*

xii. PODOPHYLLUM. Calyx of three leaves, deciduous; corolla of nine petals; berry of one cell, crowned with the stigma.

6. *Flowers ten-petaled.*

xiii. BIXA. Calyx five toothed; corolla ten petaled; capsule hispid, bivalved.

7. *Flowers many petalled.*

xiv. NYMPHÆA. Calyx from four to six leaved; petals of the corolla numerous; stigma radiated, sessile, with a central nectary; berry superior, many celled, many seeded.

xv. CORCHORUS. Corolla five petalled; calyx five leaved, deciduous; capsule from two to six celled, from two to six valved.

Order Digynia.

xvi. FOTHERGILLA. Calyx bell-shaped, truncated, entire; corolla none; germs combined; capsule of two valves; seeds solitary, bony.

xvii. PÆONIA. Calyx five leaved; corolla of five petals; styles none; capsules many seeded.

Order Trigynia.

xviii. DELPHINIUM. Calyx none; corolla of five petals, the upper one spurred; nectary cloven, produced into a horn behind; siliques one to three.

XIX. ACONITUM. Calyx none ; petals of the corolla five, the highest arched, shaped like a hood or helmet ; nectaries two, stalked, recurved ; capsules three or five.

Order Tetragynia.

XX. CIMICIFUGA. Calyx four or five leaved ; nectaries four, resembling petals, pitcher-shaped ; capsules from four to seven.

Order Pentagynia.

XXI. AQUILEGIA. Calyx none ; corolla of five petals ; nectaries five, between the petals, horned ; capsules five, distinct.

XXII. NIGELLA. Calyx none ; corolla of five petals ; nectaries from five to ten, within the petals, three cleft, two lipped ; capsules five, connected.

Order Polygynia.

XXIII. HYDRASTIS. Calyx none ; corolla of three petals ; nectary none ; berry composed of single seeded grains.

XXIV. ATRAGENE. Calyx none ; corolla two-fold ; inner petals numerous, the exterior larger, four ; seeds tailed.

XXV. CLEMATIS. Calyx none ; petals of the corolla four, rarely five ; seeds tailed.

XXVI. THALICTRUM. Calyx none ; petals of the corolla four or five ; seeds naked, without appendages.

XXVII. ISOPYRUM. Calyx none; petals of the corolla five, deciduous; nectaries tubular, three cleft; capsules sessile, of one cell, and one valve; seeds numerous.

XXVIII. HELLEBORUS. Calyx none; petals of the corolla five or more; nectaries tubular, two lipped; capsules compressed, nearly erect, with many seeds.

XXIX. CALTHA. Calyx none; petals of the corolla five to eight; nectaries none; capsules several, many seeded, opening at the upper suture.

XXX. ANEMONE. Calyx none; petals of the corolla six to nine; seeds many.

XXXI. TROLLIUS. Calyx none; petals of the corolla numerous; nectaries about nine, linear, flat; capsules numerous, oblong, with many seeds.

XXXII. ANNONA. Calyx three leaved; corolla of six petals; berry many seeded, roundish, with a scaly bark.

XXXIII. LIRIODENDRON. Calyx three leaved; corolla of six petals; anthers bursting outwardly; seeds tiled, forming a sort of cone.

XXXIV. MAGNOLIA. Calyx three leaved; petals of the corolla from six to twelve; anthers bursting inwardly; capsules of two valves crowded into the form of a cone; seeds pulpy, pendulous.

XXXV. RANUNCULUS. Calyx of five leaves; petals of the corolla five to eight, with a honey-bearing pore in the claw of each; seeds naked.

XXXVI. ADONIS. Calyx five leaved; petals of the corolla five or more, without a neutary; seeds naked.

XXXVII. HYDROPELTIS. Calyx none; corolla of six petals, permanent, the three outward shorter; nectaries none; capsules several, superior, with one cell and two seeds.

CLASS XIII.

POLYANDRIA.

Order Monogynia.

I. PAPA'VER, from *papa*, pap, being put amongst infants' food to procure sleep. Nat. ord. Linn. Rhœadeæ. Juss. Papaveraceæ. 9 Species.

* *Capsules bristly.*

1. P. Hy'bridum. *Mongrel Poppy.* "Capsule nearly globular, furrowed, bristly; stems many flowered," branched, about a foot high, leafy; with closely pressed bristles; leaves dark green, alternate, doubly wing-cleft, in many narrow segments, bristly like the stem; flowers terminal, smallish, deep red with a violet spot at the base of each petal; July. England. A.

2. P. Argemone. *Long Rough-headed Poppy.*
 "Capsules club-shaped, bristly; stem leafy, many flowered," much like the former; segments of the leaves broader, colour of the plant lighter; corolla pale scarlet; capsule not channeled, but obscurely five sided; stamens broad at the summit; stigma of four or five rays. July. Britain. A.

3. P. Alpinum. *Alpine Poppy.* "Capsule roundish, bristly; stalk single flowered, bristly, leafless; leaves doubly pinnate," numerous, all radical, rather glaucous; corolla pale yellow, or copper colour, or reddish white, rather small. July. The Alps. 1759. P.

4. P. Nudicaule. *Naked-stalked Poppy.* "Stalk single flowered, bristly, leafless; leaves simple, wing-cleft;" it scarcely differs from the former except in its leaves; capsule ovate, bristly; flowers pale sulphur colour, sometimes white. June to August. Siberia. 1730. B.

** *Capsules smooth.*

5. P. Rhoeas. *Common Red Poppy, Corn Rose.*
 "Capsules smooth, nearly globular; stem many flowered, rough with horizontal hairs; leaves wing-cleft, cut;" stem two feet high, branched; flowers of a brilliant scarlet, slightly foetid, sometimes white, or variegated and double; stigma many rayed. July. Britain. A.

6. P. Dubium. *Long Smooth-headed Poppy.*
 "Capsules smooth, oblong; stem many flowered,

hairy; hairs of the flower-stalks close pressed; leaves doubly wing-cleft;" petals pale scarlet; pollen yellow; stigma six to eight rayed. July. Britain. A.

7. *P. Somni'ferum.* *White or Garden Poppy.* " Calyx and capsule smooth; leaves embracing the stem, large, glaucous, jagged on their sides; stem smooth in the lower part, rough with spreading hairs above;" corolla pale purple or white, with a violet spot on each petal; in gardens often double, red and white, purple and white spotted, purple with dark bottoms; capsules very large; stigma many rayed; stem four feet or more in height; the buds droop, but the flowers are erect; seeds either dark brown or white, sweet. July, August. England. A.

8. *P. Cam'bricum.* *Yellow Welch Poppy.* " Capsules smooth, oblong, beaked; stem nearly smooth, many flowered; leaves pinnate, cut;" stem leafy, somewhat branched, having a few upright hairs; leaves tender, pale green; leaflets ovate, lobed; flowers on long stalks, lemon-coloured; scent not unpleasant. May to August, England. P.

9. *P. Orientale.* *Great Oriental Poppy.* " Capsules smooth; stem single flowered, leafy, rough with close pressed bristles; leaves pinnate, serrate, bristly;" root creeping; stems about two feet high; leaves most numerous from the root, a foot long, dark green; flowers very large, of a brilliant and most dazzling scarlet, generally single; stamens dark. May, June. The Levant. 1714. P.

Few plants exceed in showiness the large double flowers of the Poppy, but having somewhat an offensive smell, and being but of short duration, they are not much regarded. The milky exudation from the capsules of No. 7, when wounded, is opium, which has been a celebrated medicine from very ancient times ; it can be collected from the plants in England of equal goodness with that imported from the East, but the process is too expensive. It is remarkable that the seeds possess scarcely any narcotic properties. Syrup of Poppies may be obtained from the heads of any of the species boiled in water : it is milder in its effects than opium.

II. CHELIDO'NIUM, from χελιδων, a swallow, because it appears and disappears with that bird. Nat. ord. Linn. Rhœadeæ. Juss. Papaveraceæ. 2 Species.

1. C. Ma'jus. *Common or Great Celandine.* "Pendules or flower-stalks in umbels;" stem branched, tender, sometimes a little hairy ; leaves green above, glaucous below, large, soft, unequally lobed and notched ; flowers yellow ; foot-stalks hairy ; juice of the leaves yellow. There is a variety with both leaves and petals jagged. April to October. Britain. P.

III. GLAU'CÍUM, from its glaucoûs or sea green colour. Nat. ord. Linn. Rhœadeæ. Juss. Papaveraceæ. 4 Species.

1. G. Lu'teum. *Yellow-horned Poppy.* "Stem smooth ; stem-leaves rounded, waved ; siliques or pods roughish with minute tubercles ; flowers stalked ;"

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iii. GLAUCIUM. Calyx of two leaves ; corolla of four petals ; capsule two celled, linear, resembling a silique ; seeds numerous, dotted.

iv. CAPPARIS. Calyx four leaved, leathery ; corolla of four petals ; stamens long ; pericarp either a berry or silique, fleshy, one celled, stalked.

varieties have the berries white or red. April to June. Britain. P.

2. A. Racemo'sa. *American Black Snake Root.* "Clusters very long; fruit dry;" leaves large, compound, branched as in the former; stems four or five feet high; petals thick, small, white, in a long reflex spike, rarely producing seeds. July, August. North America. P.

The berries of the first species are in a high degree poisonous; its root has been introduced into medicine for nervous disorders, but its use requires the greatest caution.

vi. CISTUS, from *cista*, a little chest; the seeds being inclosed in the capsule; this derivation is, however, very uncertain. Nat. ord. *Linn.* *Rotaceæ*. *Juss.* *Cisti.* 79 Species.

* *Without stipules, stem shrubby.*

1. C. Villo'sus. *Downy Rock Rose, or Shrubby Cistus.* "Arborescent; leaves egg-shaped, stalked, hairy;" stem woody, much branched, forming a large bushy head, three or four feet high; branches cylindrical, cottony, whitish; leaves slightly wrinkled, greyish green; flowers of a fine red, on stalks. July. South of Europe. 1640. E. S. Gr. Ho.

2. C. Populifolius. *Poplar-leaved Cistus.* "Arborescent; leaves heart-shaped, even on the surface, stalked, pointed;" stem three or four feet high, branched with a brown bark; branches brittle, beset with loose hairs; flowers white, large, slightly stained with

purple at the edge. June, Portugal. 1656. E. S.
Gr. Ho.

3. C. Laurifolius. *Laurel-leaved Cistus.* "Arborescent; leaves oblong, egg-shaped, stalked, three-nerved; smooth on the upper side, woolly below; leaf-stalks united at the base; peduncles many flowered;" stem five or six feet high; branches brown; flowers white, upper ones forming an umbel. July. Spain. 1731. E. S.

4. C. Ladani'ferus. *Common Gum Cistus.* "Arborescent; leaves nearly sessile, connate, linear, lanceolate, smooth above, downy beneath; peduncles one flowered; capsules ten celled;" flowers very large, white, sometimes with a violet spot in the centre; leaves sometimes waved at the edge, sometimes flat. June, July. Spain. 1629. E. S.

5. C. Monspeliensis. *Downy Montpelier Gum Cistus.* "Arborescent; leaves linear, lanceolate, sessile, woolly on both sides, three nerved;" peduncles branched, mostly in one row; stem about three feet high, branched; leaves dark green, clammy; flowers white, stalks woolly. July. South of France. 1656. E. S. Gr. Ho.

6. C. Salvifo'lius. *Sage-leaved Cistus.* "Arborescent; leaves stalked, egg-shaped, wrinkled, somewhat hairy; flower-stalks long, one flowered;" stem from one to two feet high, much branched, sometimes procumbent; leaves opposite, obtuse, greenish on the

upper surface, almost cottony beneath; flowers white or pale yellow. July. South of Europe. 1548. E. S.

7. C. Iaca'nus. *Hoary-leaved Cistus.* "Arborescent; leaves spoon-shaped, woolly, wrinkled, lower ones connate, sheathing at the base;" stem two feet high; branches woolly; leaves opposite, sessile, oblong, with three nerves at the base; flowers purple; petals heart-shaped. June to August. South of Europe. 1596. E. S. Gr. Ho.

8. C. Cre'ticus. *Cretan Cistus.* "Arborescent; leaves spoon-shaped, stalked, wrinkled, hairy, waved at the edges; flower-stalks short, one flowered; calyx leaves pointed, woolly;" stems several, often cracked; branches reddish brown; flowers rose-purple, with a yellow claw. June to August. The Levant. 1731. E. S. Gr. Ho.

9. C. Al'bidus. *White-leaved Cistus.* "Arborescent; leaves ovate, lanceolate, woolly, hoary, sessile, slightly hairy;" stem three or four feet high; branches woolly, not hairy; leaves opposite, flat; flowers purple or rose-coloured, large; peduncles cottony, one flowered; calyxes cottony. July. Spain. 1640. E. S.

10. C. Cris'pus. *Curled-leaved Cistus.* "Arborescent; leaves lanceolate, pubescent, three nerved, waved;" a small shrub; stems several, branched; branches a little cottony; leaves small, sessile, wrinkled, whitish on both sides; flowers purple, nearly sessile, three or four together at the summit of each

branch, forming a head enveloped with floral leaves. July. Portugal. 1656. S. E. Gr. Ho.

11. C. Halimifo'lius. *Purslane-leaved Cistus.* "Arborescent; leaves oblong, ovate, somewhat acute, lessening into the foot-stalk, hoary on both sides; peduncles long, branched, somewhat panicled; two of the calyx leaves linear;" stem two or three feet high; branches forming a head; flowers yellow, with a purple spot in the centre; it varies with leaves blunt. July. Spain. 1656. E. S. Gr. Ho.

** *Without stipules, stem somewhat shrubby.*

12. C. Umbella'tus. *Umbel flowered Cistus.* "Somewhat shrubby, procumbent; leaves opposite, linear; flowers umbelled;" stems scarcely a foot high; flowers white, numerous, partly lateral, partly terminal, in a kind of umbel; calyx three-leaved. June, August. France. 1731. E. S. Gr. Ho.

13. C. Læ'vipes. *Cluster-leaved Cistus.* "Somewhat shrubby, ascending; leaves alternate, clustered, thread-form, smooth; peduncles in bunches;" stems several, herbaceous when young, woody when old, much branched; branches slender; leaves numerous, glaucous; flowers yellow, scentless; three inner leaves of the calyx coloured. June to August. South of Europe. 1690. E. S. Gr. Ho.

14. C. Scabro'sus. *Rough Cistus.* "Somewhat shrubby; leaves opposite, egg-shaped, hairy, rough, three nerved; calyx three leaved;" stems decumbent,

hairy; branches short; flowers deep yellow, paler in the centre, terminal, somewhat panicled. July. Italy. 1775. E. S.

15. C. Marifolius. *Marum-leaved Cistus*. "Somewhat shrubby; leaves opposite, stalked, oblong, woolly beneath;" stems three or four inches high, woody, branched; leaves spreading, flat; flowers yellow, rarely white, small, scentless, in terminal bunches, few flowered; calyx hairy, with several brown ribs. May, June. England. E. S.

*** *Without stipules, stem herbaceous.*

16. C. Tubera'ria. *Plaintain-leaved Cistus*. "Root leaves egg-shaped, three nerved, woolly; stem leaves smooth, lanceolate, upper ones alternate;" stem simple; root leaves spreading on the ground; flowers yellow, in a sort of corymb. July. South of Europe. 1752. P. Gr. Ho.

17. C. Guita'tus. *Spotted flowered Cistus*. "Leaves opposite, lanceolate, three nerved, bunches without floral leaves, sometimes with one leaf;" stem erect, square, hairy; leaves rather obtuse, entire, hairy on both sides; flowers yellow, with a dark purple spot at the base; calyx hairy. June, July. England. A.

**** *With stipules, stem herbaceous.*

18. C. Ledifo'lius. *Ledum-leaved Cistus*. "Pubescent; leaves lanceolate; peduncles erect, shorter than the calyx;" stem hairy, leafy, few flowered; leaves opposite, stalked, obtuse, entire, pubescent on

both sides; stipules two, lanceolate, acute, three times shorter than the leaf; flowers yellow, erect, on short stalks. July. England. A.

19. *C. Salicifolius*. *Willow-leaved Cistus*. "Stem spreading, woolly; flowers in bunches; erect; flower-stalks horizontal;" branches spreading, about five inches long, pubescent; leaves stalked, small, oval, oblong, slightly wrinkled, rather downy; flowers small, pale yellow, or whitish. June, August. South of Europe. 1759. A.

20. *C. Egyptiacus*. *Egyptian Cistus*. "Erect; leaves linear, lanceolate, stalked; calyxes inflated, larger than the corolla," stem slender, simple; flowers yellowish, very short, drooping in a terminal cluster; three outer leaves of the calyx converging together into the form of a bladder, with fringed purplish nerves. July. Egypt. 1764. A.

***** *With stipules, stem somewhat shrubby*.

21. *C. Surrejanus*. *Dotted-leaved Cistus*. "Leaves ovate, oblong, hairy underneath, dotted; petals lanceolate;" stems prostrate, leafy; leaves obtuse, flat, stalked, hairy, and studded with hollow points beneath, green; stipules two, lanceolate, fringed; flowers yellow, erect; bunches many flowered, recurved; calyx hairy, with red nerves. July to October. England. E. S.

22. *C. Serpyllifolius*. *Wild Thyme-leaved Cistus*. "Leaves oblong; calyxes polished;" stems shrubby

and crooked ; branches slender ; leaves narrow, stiff, opposite ; flowers in a sort of umbel, pale yellow. May to September. Alps of Austria. 1731. E. S.

23. C. Helian'themum. *Dwarf Cistus, or Little Sun-flower.* " Stipules lanceolate ; leafy, oblong, revolute, somewhat hairy ;" stems leafy, hairy ; leaves small, various in size, stalked, white beneath ; stipules acute, fringed ; flowers bright yellow, in terminal bunches, on hairy foot-stalks ; calyx coloured, with hairy ribs ; petals of the corolla roundish, varying to white and rose colour. May to September. England. E. S.

24. C. Apenni'num. *Apennine Cistus.* " Stem spreading ; leaves lanceolate, hairy ;" stem a foot high ; leaves green and rough, with hairs on the upper surface, hoary underneath ; with three small stipules at each of the lower joints ; flowers white. June to August. Alps of Italy. 1731. E. S.

25. C. Polifo'lius. *White Mountain Cistus.* " Stem procumbent, with a star-like pubescence ; leaves oblong, revolute, woolly beneath ;" stems from five to eight inches long ; leaves marked with a prominent nerve ; flowers white ; calyx purplish, hairy, chiefly on the nerves. May to July. England. E. S.

This numerous genus presents some difficulties in its investigation, on account of the abundant varieties which occur in it, and the near resemblance of some of the species : all of them are highly ornamental, as their flowers, though of short duration, are succeeded by fresh ones al-

most every day, for two months successively. Some of the species, marked as Green-house plants, will live in the open air during the winter, unless nipped by the frost in severe weather; and perhaps some other species not mentioned are occasionally to be found in gardens. From *C. Creticus* is obtained the drug Gum Ladanum, a resinous substance, secreted from its leaves and branches. In ancient times it was carefully detached from the beards of Goats who had browsed upon the shrubs: it is now collected by leather thongs brushed over the plants. The Common Gum Cistus, though called *C. Ladaniferum*, does not produce this substance, and is therefore improperly named; this, however, with some other species, produces a gummy exudation of a somewhat similar nature, and pleasant smell.

VII. SARRACE'NIA, named by Tournefort, in honour of Dr. Sarrazin, a French botanist, who collected plants in Canada. Nat. ord. *Linn.* Rhœadeæ. Juss. Uncertain. 4 Species.

1. *S. Fla'va*. *Yellow Side-saddle Flower.* "Leaves erect, tubular, contracted at the base, flat at the border, heart-shaped, pointed;" about three feet high, small at the bottom, widening gradually towards the top; stem none; flowers large, yellow, with green veins, drooping; their stalks about as tall as the leaves. July. North America. 1752. P.

2. *S. Purpu'rea*. *Purple Side-saddle Flower.* "Leaves cowled like a friar's hood, bellying, bowed, keeled;" stem none; leaves several, radical, stalked,

about four inches in length, erect, catching the rain like a funnel; flower-stalks one or more, radical, taller than the leaves; petals brownish red; calyx dull purple. July. North America. 1640. P.

These are bog plants, and with difficulty preserved in gardens; they are in consequence frequently lost, and again from time to time re-introduced. The hollow of the leaves have always water standing in them, to which, in great droughts, birds resort to quench their thirst. The name is derived from the fancied resemblance of the stigma to a pillion.

VIII. *Ti'lia*, from *τίλια*, the Elm of the Greeks, which tree it somewhat resembles. Nat. ord. *Linn.* Columniferæ. *Juss.* Tiliaceæ. 4 Species.

1. *T. Europæ'a*. *Common Lime, or Linden Tree.* "Flowers without a nectary; capsules leathery; leaves heart-shaped, undivided, smooth, and somewhat glaucous beneath; branches of the veins woolly;" a tall upright tree; leaves alternate, on longish stalks, pointed, sharply serrated; flower-stalks axillary, bearing an irregular umbel of yellowish flowers; floral leaf remarkable, large, oblong, united to the stalk; flowers sweet scented, especially at night. June to August. Britain. T.

Var. 1. *Corallina*, with red twigs; leaves soft, hairy; capsule four sided.

Var. 2. *Parvifolia*, with leaves small; flowering later.

2. T. America'na. *Broad-leaved Lime Tree.* "Flowers furnished with a nectary; leaves round, heart-shaped, abrupt, with a point, serrate, veins minutely hairy beneath;" petals of the corolla abrupt, crenate; capsule ovate, somewhat ribbed; branches brown, smooth; leaves larger and tree higher than in T. Europaea; flowers corymbose. July. North America. 1752. T.

3. T. Pubes'cens. *Hoary Lime Tree.* "Flowers with a nectary; leaves heart-shaped, pointed, coarsely serrated, abrupt, and unequal at the base, downy beneath;" panicles forked, compound, of numerous flowers; petals of the corolla acute; more fragrant than either of the above species; tree smaller. July, August. Carolina. 1726. T.

4. T. Al'ba. *White Lime Tree.* "Flowers with a nectary: leaves deeply heart-shaped, obscurely lobed, sharply serrated, downy and snow-white beneath;" flowers light yellow, in a panicle, with the scent of the jonquil: this tree does not flourish so well as either of the two preceding. June to August. Hungary. 1767. T.

These trees are of quick growth, and succeed in almost any soil and exposure. Their wood is used in turning, for bowls, basins, &c. the bark serves for cordage, and in Russia is manufactured into those mats so well known and useful to gardeners. The celebrated Gibbons made choice of Lime-wood, on which he has immortalized his talents, in carving festoons of fruit, flowers, &c. All the

species are remarkably attractive to bees, as the flowers abound in honey.

IX. ARGEMONE, from *αργειμόνη*, a disorder of the eye, which this plant is said to cure. Nat. ord. Linn. Rhœadææ. Juss. Papaveraceæ. 3 Species.

1. A. Mexicana. *Mexican Argemone, Prickly Poppy, Devil's Fig.* "Capsules six valved; leaves spiny;" stems rising two or three feet, armed with prickles; corolla yellow; from four to six petals; seeds numerous, black; plant abounding with a milky juice, which exposed to the air turns of a bright yellow, and is scarcely distinguishable from Gamboge. August. Mexico. 1592. A.

X. THE'A, from a Chinese word of somewhat similar pronunciation. Nat. ord. Linn. Columniferæ. Juss. Aurantia. 2 Species.

1. T. Bohea. *Bohea Tea.* "Flowers with six petals;" stem from three to six feet high, bushy; branches numerous, leafy; young shoots finely silky; leaves alternate, on short thick channelled foot-stalks, evergreen, elliptic, oblong, with a blunt notched point, serrated except at the base; flowers white, not unlike those of the myrtle, but longer, usually two together; anthers and stigma yellow. August, September. China. 1768. E. S. Gr. Ho.

Much dispute has arisen whether the Green and Black

Teas were produced from different species of the *Thea*, or whether their different qualities proceeded merely from the mode of gathering and drying the leaves, as well as from their various age; the latter opinion seems now to be established. Obvious varieties, however, in the plants which have been cultivated in this country, are apparent; as the deeper or paler colour of the leaves; their being more or less serrated, broader or narrower: the general appearance of the plant very much resembles the *Camellia*.

XI. *SANGUINA'RIA*, from *sanguis*, blood; the colour of its juice. Nat. ord. *Linn. Rhœadeæ. Juss.* Papaveraceæ. 1 Species.

1. *S. Canaden'sis*. *Canadian Blood Wort, Puccoon*. Root tuberous; stems upright, palish green or brownish, tinged with purple; leaves radical, solitary, enveloping the flower-bud, lobed and veined; flowers solitary, terminal, often double, snow-white, expanding only in fine weather; pods yellow; plant when cut emitting a red acrid juice, with which the native Americans paint themselves. March, April. North America. 1680. P.

This plant, if not particularly showy, has few equals in point of delicacy and singularity: presenting somewhat to admire from its earliest appearance to its latest duration.

XII. *PODOPHYL'LUM*, from ποδός, πόδος, a foot, and φύλλον, a leaf; the leaf resembling the webbed foot

of a water fowl. Nat. ord. *Linn. Rhœadæ. Juss. Ranunculaceæ.* 2 Species.

1. P. *Pelta'tum. Duck's Foot, or May Apple.* "Leaves peltate, lobed;" stems solitary, simple, round, about a foot high, crowned with two large peltate smooth leaves, between whose foot-stalks grows a solitary, stalked, drooping, white flower, netted with veins. May. North America. 1664. P.

xiii. *Bi'xa*; the name of the plant in the language of the native South Americans. Nat. ord. *Linn. Columniferæ. Juss. Tiliaceæ.* 1 Species.

1. B. *Orella'na. Arnotto, or Anotta.* A shrub rising about eight feet, sending out many branches at top, which form a head; leaves heart-shaped, stalked; flowers in loose panicles at the end of the branches, of a pale peach colour; petals large. June to August. West Indies. 1690. S. Hot Ho.

The drug called Arnotto, used in dying and painting, and also in colouring cheese in Gloucestershire, is prepared from the red pulp which covers the seeds of this plant.

xiv. *NYMPHÆ'A*, from its growing in water, which the poets feign to be the residence of the nymphs. Nat. ord. *Linn. Miscellaneæ. Juss. Hydrocharides.* 7 Species.

1. N. *Lu'tea. Yellow flowered Water Lily.* "Leaves heart-shaped, lobed at the base, close together; calyx of five leaves; margin of the stigma

entire; rays from fourteen to twenty;" leaves radical, numerous, floating; foot-stalks two-edged, flat; flower-stalks one flowered; petals yellow; back of the calyx green; flowers smelling somewhat like ratifia, and by some are called brandy bottles: the Turks infuse them in their sherbet. June, July. Britain. P.

2. N. Kalmia'na. *Canadian Water Lily.* "Calyx of five leaves; stigma toothed; rays from eight to twelve; leaves heart-shaped; lobes at the base rather distant, furrowed with veins beneath;" foot-stalks not flattened; flowers yellow, with a purplish bordered stigma. August. Canada. 1707. P.

3. N. Adve'na. *Three-coloured Water Lily.* "Calyx of six leaves, in two rows; stigma waved; seed furrowed; leaves heart-shaped, with spreading lobes;" foot-stalks cylindrical; inside of the three larger calyx leaves purple; petals yellow; anthers very numerous, crimson, bordered. August. North America. 1772. P.

4. N. Al'ba. *Common White Water Lily.* "Leaves heart-shaped, entire, even underneath; stigma of sixteen ascending rays;" an aquatic plant; flower-stalks radical, simple, bearing a large white flower; petals elliptic, numerous; upper side of the calyx often tinged with a blush-colour; stamens and pistil yellow. June, July. Britain. P.

5. N. Odora'ta. *Sweet scented White Water Lily.* "Leaves heart-shaped, entire, the nerve and veins prominent beneath; stigma from sixteen to twenty

rays, inflexed at their points;" rather smaller than the last; flowers smelling like hawthorn; petals white, linear, oblong. July. North America. 1796. P.

N. N. Lo'tus. Egyptian Lotus Water Lily. "Leaves somewhat peltate, sharply toothed on both sides, without dots; the veins prominent and netted;" leaf elliptic, cloven at the base into two lobes; flowers larger than in *N. Alba*; rays of the stigma numerous. June to September. Egypt. 1802. P. Hot Ho.

The *Nymphaea Alba* has been long celebrated for closing its flowers in the afternoon, and lying down upon the surface of the water, or sinking somewhat below it during the night. In the forenoon they rise some inches above the surface, and expand, especially in hot sun-shiny weather. The last species, as described by the ancients, possesses the same property. The *N. Lotus*, with the Egyptians, had acquired somewhat of a sacred character, being the emblem of fertility; appearing chiefly in the grounds inundated by the overflowing of the Nile, and disappearing as the water receded. Its seeds were dried and ground to make a sort of bread. It is likewise a native of the Ganges, as well as another plant, the *Nelumbium Speciosum*, or Sacred Bean of India, to which it bears a strong resemblance; the roots of this latter also are edible, and its seeds about the size of a bean, have a delicate flavour, resembling almonds; this plant also, with the Orientals, has a mystical meaning. The Egyptian or Herb Lotus, must be carefully distinguished from the Tree Lotus of Homer. See *Zizyphus Lotus*, Vol. I. p. 185.

XV. COR'CHORUS, from *xepis*, to purge; this name was anciently given to some common pot herb very bitter. Nat. ord. Linn. Columniferæ. Juss. Tiliaceæ. 14 Species.

1. C. Japo'nicus. *Japan Corchorus.* "Capsules round, smooth; leaves doubly serrate;" stem shrubby, smooth; branches alternate, angular; leaves several together, from alternate buds, stalked, ovate, acuminate; serratures acute, bristle-shaped; nerved, woolly; flowers yellow or orange-coloured, solitary, on short stalks; commonly double. This plant, when first introduced, seemed to require the protection of the Green-house, but now flourishes in the open air extremely well, when nailed against a wall, and is highly ornamental. March to July. China. 1804. S.

Order Digynia.

XVI. FOTHERGIL'IA, from Dr. John Fothergill, an eminent physician and patron of botany; died 1730. Nat. ord. Linn. and Juss. Amentaceæ. 1 Species.

1. F. Alnifolia. *Obtuse-leaved Fothergilla.* A tree having the appearance and leaves of Alder; leaves alternate, stalked, wedge-shaped, entire, serrate at the tip, green above, hoary beneath; flowers at the ends of the branches, in oblong spikes or catkins, white, of no great beauty; leaves varying in breadth. April. North America. 1765. T.

xvii. PÆONIA, in memory of Pæon, the physician recorded in Homer. Nat. ord. Linn. Multisiliquæ. Juss. Ranunculaceæ. 7 Species.

1. P. Mou'tan. *Chinese Tree Pæony.* "Stem perennial, woody; leaflets oblong, ovate, glaucous, somewhat hairy beneath; terminal leaf three lobed; germs numerous;" leaves on long stalks, alternate, large, spreading, twice or thrice ternate; flowers terminating the branches, solitary, double; petals rose-coloured. April to June. China. 1789. S.

2. P. Officinalis. *Common Pæony.* "Leaves twice compound; leaflets with broad lanceolate lobes; capsules downy, nearly upright;" stem herbaceous; leaves large, spreading; flowers terminal, solitary, crimson, sometimes flesh-coloured or white. This plant has two varieties: one with roots in round knobs; leaves paler; flowers smaller, often double, deep purple, called the Female Pæony. The other with roots in oblong knobs; flowers large, usually single, red; lobes of the leaves ovate; and called the Male Pæony: these old names have nothing to do with the sex of the plant, the flowers in both being perfect. June. Switzerland. 1648. P.

3. P. Corallina. *Entire-leaved Pæony.* "Leaves twice ternate, leaflets ovate, undivided; capsules downy, recurved;" flowers terminal, solitary; petals large, crimson; stamens red, with yellow anthers. June. England. P.

4. *P. Peregrina*. *Crimson flowered Turkish Peony*. "Leaves twice ternate; leaflets elliptic, oblong, decurrent, lobed, glaucous and hairy beneath; capsules erect, downy;" a plant of smaller dimensions than any of the preceding; flowers crimson, often double, with linear intercalary petals like a double Anemone. June. The Levant. 1629. P.

5. *P. Albiflora*. *White flowered Peony*. "Leaves twice ternate; leaflets elliptic, lanceolate, acute, entire, smooth; capsules recurved, smooth;" stem brown, smooth; flowers comparatively small, snowy white, with partly closed petals; calyx brown, accompanied by three sessile floral leaves, flowers sweet scented, sometimes tinged with pink or yellow; germs three or four. May, June. Siberia. 1784. P.

6. *P. Anomala*. *Jagged-leaved Siberian Peony*. "Leaves twice ternate; leaflets with many lanceolate segments, smooth; capsules depressed, smooth;" calyx accompanied by lance-shaped floral leaves, longer and narrower than in the former; petals of the corolla concave, full rose colour; germs five. May, June. Siberia. 1788. P.

7. *P. Ternifolia*. *Fine-leaved Peony*. "Leaves thrice ternate; leaflets in numerous linear, awl-shaped segments, smooth; capsules hairy;" leaves dark green, spreading; flowers terminal, solitary, of a deep rich blood colour, with copious yellow stamens; floral leaves partly divided, partly entire. June. The Ukraine. 1765. P.

These plants having a bushy growth and large conspicuous flowers, make a fine appearance: the capsules opening lengthways, when ripe, discover their beautiful red seeds in a very ornamental manner.

Order Trigynia.

XVIII. DELPHI'NIUM, from the fancied resemblance of the horned nectary of the flower to a dolphin. Nat. ord. Linn. Multisiliquæ. Juss. Ranunculaceæ. 14 Species.

* *Capsules solitary.*

1. D. Conso'lida. *Field Larkspur.* "Nectary of one leaf; stem somewhat divided;" leaves alternate, the lower stalked, the upper sessile, three or five cleft into linear segments; corolla blue, varying to purple, pink, or white. June, July. England. A.

2. D. Aja'cis. *Upright Garden Larkspur.* "Nectary of one leaf; stem unbranched, simple;" leaves finely divided, commonly by threes on broad stalks; spike of flowers erect, more dense than the preceding, often large, double, of various colours, blue, white, pink, purple. June, July. Switzerland. 1573. A.

3. D. Aconiti. *Aconite-like Larkspur.* "Nectary of one leaf, with four teeth in front; capsules solitary; little branches one flowered;" stem panicled, hoary; leaves pedate, many cleft, linear; flowers livid, small, variegated within with green; outer nectary tubular, large, obtuse at the end. July. The Levant. 1801. B.

*** Capsules three to each flower.*

4. D. Ambiguum. *Doubtful Larkspur.* "Nectary one leaved; corolla six petaled; leaves many parted;" stem much branched; corolla blue, with a green outside; spur frequently, with two teeth at the tip; leaves long; flowers placed thinly on the spike. July, August. Barbary. 1759. A.

5. D. Peregrinum. *Broad-leaved Annual Larkspur.* "Nectaries two leaved; corolla nine petaled; leaves many-parted, obtuse;" stem branching; upper leaves generally simple; flowers scattered, small, of a deep blue; capsules one or two, rarely three. July. The Levant. 1629. A.

6. D. Grandiflorum. *Great flowered Larkspur.* "Nectaries two leaved, with lips entire; flowers commonly solitary; leaves compound, linear, many parted," smooth, light green; flowers on long stalks, of a fine blue, large. July to September. Siberia. 1741. P.

7. D. Intermedium. *Palmated Bee Larkspur.* "Nectaries two leaved, with ovate cloven lips, and ovate divisions; leaves three parted, divisions three cleft;" stems growing to six feet high; leaves broad, stalked; flowers in long spikes, terminal, of a fine blue. July. Silesia. 1710. P.

8. D. Elatum. *Common Bee Larkspur.* "Nectaries two leaved, with lips ovate, notched, and with short unequal divisions; leaves somewhat peltate, three parted, the divisions many cleft;" stems from

five to six feet high ; spike of flowers very long and handsome, deep blue, with a wrinkled spur. June to September. Switzerland. 1597. P.

9. D. Exaltatum. *American Larkspur.* "Nectaries two leaved with oblong cloven lips, and lanceolate equal divisions ; leaves three parted, with three cleft divisions ;" stem six feet high ; lower leaves large, stalked, greyish ; spike terminal, often a foot and half long ; flowers pale blue ; nectary bearded, having the appearance of a fly. July, August. North America. 1758. P.

10. D. Pumiceum. *Scarlet flowered Larkspur.* "Nectary two leaved ; lips oblong, two parted, hairy ; divisions lanceolate, equal ; germs and peduncles hairy ; leaves three parted ; divisions many cleft ;" much resembling D. Elatum, except that the flowers are dusky red ; horn straight ; no spiral leaves on the calyx. July. Siberia. 1785. P.

11. D. Staphisagria. *Stavesacre.* "Nectaries four leaved, shorter than the petal ; leaves palmate, with the lobes obtuse ; stem strong, hairy ; leaves hairy ;" flowers forming a loose spike, pale blue, or purple ; horn of the nectary short, blunt. April to August. South of Europe. 1596. B.

The Delphinium Ajacis is one of the oldest denizens in the English garden, and is certainly highly ornamental. Linnaeus has given it the specific name Ajacis, as supposing it to be the Hyacinth of Ovid and other poets, but on what foundation does not appear, other authorities con-

tending that the plant alluded to in the Metamorphoses is the Martagon Lily. The powdered seed of Stavesacre is used in cutaneous eruptions, and also for destroying lice, and other insects.

XIX. ACONITUM, *aconitum*, without dust; because it grows on rocks destitute of soil. Nat. ord. Linn. Multisiliquæ. Juss. Ranunculaceæ. 15 Species.

* *With white or yellow corollas.*

1. A. Lycoc'tonum. *Great Yellow Wolf's Bane, or Monk's Hood.* "Head with a spiral spur, and ovate, notched lip; helmet of the corolla lengthened, conical; leaves palmate, pubescent, with three cleft divisions;" stem a little branched, leafy; spike simple, with few flowers; corolla pale yellow; a variety blueish ash colour. July. August. The Alps. 1596. P.

2. A. Pyrena'icum. *Pyrenean Wolf's Bane.* "Hood with a straight obtuse spur, and notched lip; helmet conic; leaves in five, finger-like divisions, each three-parted, toothed, wedge-form;" stem about four feet high; spike long, of yellow flowers. June, July. The Pyrenees. 1739. P.

3. A. Anthe'ra. *Wholesome Wolf's Bane.* "Hood with a refracted, hooked spur; lip inversely heart-shaped; helmet conic, rounded; leaves many cleft, with linear divisions;" stem about eighteen inches high; peduncles sustaining one or two flowers, greenish yellow, hairy, pulpy, inelegant, sometimes white. June to August. Switzerland. 1596. P.

4. A. Album. *White Wolf's Bane*. "Hood with a hooked obtuse spur; lip short, reflected, two cleft; helmet conic, with a broad claw; leaves three parted, with egg wedge-shaped divisions, three cleft, toothed;" stem six feet high; flowers large, white. July, August. The Levant. 1752. P.

** *With blue corollas.*

5. A. Napellus. *Common Wolf's Bane, or Monk's Hood*. "Hood with a straight obtuse spur; lip lanceolate, two cleft; leaves shining, five parted, with divisions, linear, scored with a line;" spike dense, cylindrical; leaves blackish green; petals deep blue, sometimes rose-coloured or white. May to July. Germany. 1596. P.

6. A. Variegatum. *Variegated Wolf's Bane*. "Hood with a hooked obtuse spur; lip oblong, notched; helmet convex; leaves shining, three parted, with three cleft wedge-shaped toothed divisions;" spikes of flowers shortish; corollas variegated, changing sometimes to plain blue. June to August. South of Europe. 1597. P.

7. A. Cammarum. *Purple Wolf's Bane*. "Hood with a hooked obtuse spur; lip lanceolate, straight, acutely notched; helmet lengthened, conical; leaves opaque, five parted, with oblong wedge-form three cleft toothed divisions;" stem sometimes six feet high; flowers paler blue than in the Common Monk's-hood; helmet larger; leaves broader; flowers sometimes

of a deeper blue, or white. July. Germany.
1752. P.

8. *A. Uncinatum*. *American Wolf's Bane*. "Flowers generally with five styles; corolla with a long extended helmet; leaves three or five lobed, angular, notched;" flowers blue, coming out singly; top of the helmet hooked. July, August. Pennsylvania.
1763. P.

All these plants require little attention, and as they bear handsome spikes of flowers, are desirable for large borders; most of the species are esteemed dangerous. The Common Monk's-hood, especially the root, is one of the most virulent of all vegetable poisons, yet it has, like many others, been introduced into medicine, and by judicious practitioners with success: it is doubtful whether one of the plants of this genus, or the *Ranunculus Thora*, were the Aconite of the ancients.

Order Tetragnynia.

xx. *CIMICIFUGA*, *quod cimices fugat*; because it drives away bugs. Nat. ord. *Linn.* *Multisiliquæ*. Juss. *Papaveraceæ*. 1 Species.

1. *C. Fœ'tida*. *Stinking Bug-wort*. Stem six feet high, cylindrical, slightly scored, hollow, a little hairy, red at the base; leaves pinnate; leaflets egg-shaped, serrated; flowers in long terminal bunches, herbaceous green, on short stalks; the whole plant of an insupportable smell; varying in the number of its pistils, petals, and capsules. July. Siberia.
1777. P.

Order Pentagynia.

xxi. AQUILEGIA, from *aquila*, -an eagle; the nectaries bearing a fanciful resemblance to an eagle's claw.. Nat. ord. *Linn. Multisiliquæ. Juss. Ranunculaceæ.* 5 Species.

1. *A. Viscosa*. *Clamy Columbine.* "Nectaries incurved; stem almost naked, with viscid hairs, and one or two flowers; leaves somewhat three lobed," about a foot high; radical leaves palmate; stem leaves one or two, ternate; peduncles one flowered; flowers blueish. May, June. Montpelier. 1752. P.

2. *A. Vulgaris*. *Common Columbine.* "Nectaries incurved, nearly as long as the petals; stem and leaves smooth;" stem about three feet high; lower leaves twice ternate, upper digitate; flowers violet, from the tops of the naked branches nodding; pistils and nectaries varying in number; corolla often double, sometimes red or white. May to July. Britain. P.

3. *A. Alpina*. *Alpine Columbine.* "Nectaries straight, shorter than the lanceolate petals;" stem and leaves smaller; flower larger than the last; lower leaves twice ternate; leaflets many cleft; corolla blue; tips of the petals yellowish green; claws of the nectaries whitish within. June. Switzerland. 1731. P.

4. *A. Canaden'sis*. *Canadian Columbine.* "Nectaries straight; stamens longer than the corolla;" stems slender, reddish; lower leaves twice ternate, irregularly divided; upper leaves simply ternate; co-

rolla yellow within, red on the outside. April, May.
North America. 1640. P.

5. A. *Viridiflora*. *Green flowered Columbine.*
"Nectaries straight, thickened and a little bent at the
tip; stamens nearly in length to the corolla;" stems
slightly angular, woolly; leaves thrice ternate; leaf-
lets two lobed, gashed; petals pale green, wrinkled;
nectaries greenish; yellow within, brownish on the
outside. May, June. Siberia. 1780. P.

XXII. *NIGEL'LA*, diminutive of *Niger*, black, from
the colour of the seeds. Nat. ord. *Linn.* *Multisiliquæ.*
Juss. *Ranunculaceæ.* 5 Species.

* *With five styles.*

1. *N. Damasce'na*. *Common Fennel Flower, Love
in a Mist, Devil in a Bush.* "Flowers surrounded
with a leafy involucre; fruit globular, smooth;" stem
branched and bushy; leaves alternate, doubly or
triply wing-cleft, finely cut, like Fennel, but flat;
flowers terminal, often double, white or pale blue,
overtopped by a circle of leaves: there is also a dwarf
variety. June to September. South of Europe.
1570. A.

2. *N. Sati'va*. *Small Fennel Flower, Herb Gith.*
"Involucre none; fruit globular, rough; nectaries
hairy, with blunt points; petals ovate; leaves rather
hairy;" stem less branched; leaves broader than the
former; petals and ten nectaries pale blue, or nearly
white, lower lip of the latter marked with a violet
stripe. June to September. Candia. 1548. A.

3. N. Arven'sis. *Field Fennel Flower.* "Involucrum none; capsules top-shaped, rough; nectaries smooth, with blunt points; petals heart-shaped;" stem much branched, from the very bottom; leaves once or twice three cleft; flowers like the last, with the same violet stripe on the nectary. June to September. Germany. 1688. A.

** *With ten styles.*

4. N. Hispa'nica. *Spanish Fennel-Flower.* "Styles ten, spreading the same length as the petals; segments of the nectary obtuse;" stem bushy; segments of the leaves linear, lanceolate; flowers large, of a rich purplish blue, varying to a pale red, with dark stamens and styles. June to September. Spain. 1629. A.

5. N. Orienta'lis. *Yellow Fennel Flower.* "Styles ten, erect, twice the length of the petals; segments of the nectary acute; seeds compressed, bordered;" stem much branched; leaves narrow; petals spoon-shaped, acute, yellow, marked with green and red; nectaries yellow, with crimson stripes across. July to September. Syria. 1699. A.

The seeds of all the species, when bruised, have a fragrant aromatic odour; those of the second species are eaten by the modern Greeks upon their bread, a custom mentioned by so ancient a writer as Dioscorides. In England, few gardens, however humble, are without the flower Love in a Mist.

Order Polygynia.

XXIII. HYDRAS'TIS, from *ὑδράντη*, to moisten; it

being an aquatic plant. Nat. ord. *Linn.* Multisiliquæ. *Juss.* Ranunculaceæ. 1 Species.

1. H. Canaden'sis. *Canadian Yellow Root.* Root of a deep yellow colour within, whence its English name; stems nine inches high, purplish; leaves two on each stem, palmate, serrate, purplish; flower solitary, white, of short duration; fruit red, succulent, somewhat like a Raspberry. June. Canada. 1759. P.

XXIV. ATRA'GENE, from *ater*, black or purple, and *gena*, a downy cheek, alluding to the pubescent corolla in some species. Nat. ord. *Linn.* Multisiliquæ. *Juss.* Ranunculaceæ. 6 Species.

1. A. Alpi'na. *Alpine or Siberian Atragene.* "Leaves doubly ternate; leaflets ovate, serrate; outer petals four;" stems slender, weak, covered with brown bark; peduncles naked, three or four inches long, one flowered; outer petals blue, white or yellowish within; inner petals dirty white. This plant is nearly allied both to Clematis and to Ranunculus: nectaries either obtuse or notched. June, July. The Alps, and also Siberia. 1753. S.

XXV. CLE'MATIS, κληματις, a vine or twig, many of the species climbing like a vine. Nat. ord. *Linn.* Multisiliquæ. *Juss.* Ranunculaceæ. 24 Species.

* *Stems climbing.*

1. C. Cirho'sa. *Evergreen Virgin's Bower.* "Leaves simple; stem climbing by opposite tendrils;

peduncles one flowered, lateral;" stem woody, resembling a vine, ten or twelve feet high, sending out branches from each joint; leaves simple and ternate, ovate; flowers white, large. March, April. Spain.

1596. E.S.

2. C. Viticel'la. *Purple Virgin's Bower.* "Leaves compound and twice compound; leaflets egg-shaped, entire;" stems slender, weak, branched, leafy; leaflets sometimes with one or two lobes; flowers blue, purplish, red, or white, often double; petals bordered by a thin membrane. June to September. Spain.

1569. S.

3. C. Viorna. *Leathery-flowered Virgin's Bower.* "Leaves compound and twice compound, some of the leaflets three-cleft; petals acute, leathery, half closed;" stems three or four feet high, scored; leaves opposite, stalked; leaflets nine to twelve, ovate, pale beneath; flowers purple or blueish, violet, axillary, solitary. June to September. North America.

1730. S.

4. C. Cris'pa. *Curled Virgin's Bower.* "Leaves simple and ternate; leaflets entire, or three lobed; petals half closed, somewhat curled at the sides; margin membranous, wrinkled;" stems weak; foot-stalks of the leaves twining; leaflets lanceolate; flowers large, reddish, solitary, on short stalks. July, August. North America. 1726. S.

5. C. Orienta'lis. *Oriental Virgin's Bower.* "Leaves compound; leaflets cut, angular, lobed, wedge shaped; petals woolly on the inside;" stems

from four to eight feet high, scored, leafy; leaves glaucous; flowers yellow, with a tinge of russet on the outside; petals lanceolate. July to October. The Levant. 1731. S.

6. C. Virginia'na. *Virginian Virgin's Bower.* "Leaves ternate; leaflets heart-shaped, somewhat lobed and angular; flowers diœcious;" stems numerous, six feet in height; leaves smooth, three-nerved beneath; flowers white, in short panicles; female flowers with antherless stamens. June, August. North America. 1767. S.

7. C. Vital'ba. *Traveller's Joy, Common Virgin's Bower, Old Man's Beard.* "Leaves pinnate; leaflets heart-shaped; foot-stalks twining;" stems branched, leafy, furrowed; leaves opposite; leaflets growing by fives, irregularly cut; flowers white, sweet scented; panicles axillary; petals leathery; seeds with a long plumy tail. July to September. England. S.

8. C. Flam'mula. *Sweet-scented Virgin's Bower.* "Lower leaves pinnate, twining, jagged; upper leaves simple, entire, lanceolate;" stems numerous, about two feet long, rather creeping, slender, leafy; flowers white, small, sweet scented, in a kind of panicle. July to October. South of Europe. 1596. S.

** *Stems erect.*

9. C. Angustifo'lia. *Narrow-leaved Virgin's Bower.* "Leaves pinnate; leaflets lanceolate, obtuse, lower ones three-cleft; stems simple, scored,

erect; corolla with many petals;" flowers white. May to September. Austria. 1787. P.

10. *C. Erecta. Upright Virgin's Bower.* "Leaves pinnate; leaflets egg lance-shaped, entire; stem erect; flowers three and five petaled;" stem about three feet high, scored, herbaceous; leaves large, opposite, downy beneath; flowers white, in upright umbels; tail of the seed yellowish. June to August. Hungary. 1597. P.

11. *C. Ochroleu'ca. Yellow-flowered Virgin's Bower.* "Leaves simple, egg-shaped, pubescent, entire; flowers erect;" stem pubescent; leaves opposite, sessile, strongly nerved; flower terminating, single, pale yellow. June, July. North America. 1767. P.

12. *C. Integrifolia. Entire-leaved Virgin's Bower.* "Leaves simple, sessile, egg lance-shaped; flower drooping;" stem from one to two feet high, erect, simple, scored, leafy; leaves opposite, pubescent at the edge; flowers blue, large, solitary, scentless; filaments yellow. June to August. Hungary. 1596. P.

Most of the species of *Clematis* are very hardy, and the climbing sorts have been long in request for covering trellis work and forming arbours, as well as for concealing walls or fences. They do not appear to advantage unless supported, and therefore are seldom placed in open borders.

look green, being full of leaves. Nat. ord. Linn.
Maltisiliquae. Juss. Ranunculaceæ. 23 Species.

1. *T. Alpinum*. *Alpine Meadow Rue*. "Stem quite simple, almost naked; cluster simple, terminal;" stem about six inches high, glaucous or purplish; radical leaves stalked, erect, ternate or pinnate; leaflets roundish, veiny, glaucous beneath; flowers from eight to ten, white or purplish: a delicate Alpine plant. May to July. Britain. P.

2. *T. Fœtidum*. *Fœtid Meadow Rue*. "Stem panicled, round, leafy; leaves triply compound, downy on both sides; flowers drooping;" leaflets small, round, lobed, innumerable, tender; petals reddish without, with fine hairs, exhaling an unpleasant strong odour. May to July. Switzerland. 1640. P.

3. *T. Tuberosum*. *Tuberous-rooted Meadow Rue*. "Root tuberous; leaves compound; leaflets rounded, glaucous, smooth; petals five;" stem a foot high; plant glaucous; flowers panicled, not numerous; petals ovate, large, white. June. Spain. 1713. P.

4. *T. Cornuti*. *Canadian Meadow Rue*. "Flowers diæcious; leaves compound; leaflets rounded, three lobed, glaucous, smooth; panicles terminal;" stem from two to three feet high; flowers small, greenish yellow; petals five. May to July. North America. 1640. P.

5. *T. Dioicum*. *Diæcious Early Meadow Rue*. "Flowers diæcious; leaves compound; leaflets heart-shaped, many lobed, very smooth; peduncles axil-

lary ;" stem about a foot high ; leaves veined ; panicles somewhat umbellate, on long stalks ; petals of the male flower white or reddish, of the female white or greenish, smaller. June, July. North America.

1759. P.

6. *T. Majus.* *Greater Meadow Rue.* "Leaves thrice pinnate ; leaflets roundish, somewhat heart-shaped, three-cleft, glaucous beneath ; panicle leafy, with crowded branches and nodding flowers ;" stem about three feet high ; petals four, greenish purple. June, July. England. P.

7. *T. Purpurascens.* *Purplish Meadow Rue.* "Stem twice as tall as the leaves ; leaves compound ; leaflets roundish, three-cleft, cut ; panicles nearly naked ; flowers drooping :" a small plant ; stem and petals purple ; stamens yellow. June, July. Canada. 1699. P.

8. *T. Flavum.* *Common Meadow Rue.* "Leaves twice pinnate ; leaflets rounded or oblong, three-cleft ; panicle much branched, dense ; flowers erect ;" stem three feet high, erect, leafy ; leaves nearly sessile, slightly glaucous, veiny ; flowers and stamens erect, yellowish white. *T. Angustifolium*, and *T. Simplex* seem to be varieties of this. May to July. Britain. P.

9. *T. Aquilegiforme.* *Columbine-leaved Meadow Rue.* "Leaves compound ; leaflets rounded, lobed and cut ; stem round ; fruit pendulous, triangular, straight ;" panicle corymbose ; flowers erect ; stem

three or four feet high, scored, leafy, glaucous or purple; leaves large, spreading; flowers large, white or pale violet; petals reflexed. May to July. Switzerland. 1731. P.

10. T. Petaloïdeum. *Daurian Meadow Rue.*
"Panicle somewhat umbellate; filaments coloured, wider than the anthers;" leaves compound; leaflets rounded, obtuse; stem simple, leafless, or with one leaf; radical leaves two, spreading, on purplish stalks; flowers white, large, not numerous; filaments white, broad; anthers yellow. July. Dauria. 1799. P.

The English name is taken from the *Thalictrum Flavum*, which has a vague resemblance to Garden Rue, but to which it bears no real affinity. All the species are hardy and durable. It is possible that some others besides the above detailed, may be found occasionally in gardens: we have also a small species, *T. Minus*, indigenous in Britain.

XXVII. ISOPY'RUM, from ισος, like, and πυρη, wheat, an ancient name of some plant unknown: by some thought to be the *Aquilegia*, which caused Linnaeus to bestow it upon the present genus, its near relation. Nat. ord. *Linn.* Multisiliquæ. Juss. Ranunculaceæ. 3 Species.

1. I. Fumarioïdes. *Fumitory-leaved Isopyrum.*
"Stipules awl-shaped; petals acute;" leaves winged; leaflets wing-cleft, ovate: a small plant; glaucous; flowers small, whitish or yellowish, of short duration,

on long stalks; capsules ten or fifteen, nearly round. June. Siberia. 1741. A.

2. I. Thalictroides. *Meadow Rose-leaved Isopyrum.* "Stipules ovate; petals obtuse;" leaves ternate; leaflets more or less three-cleft, broadish; stem a span high; flowers white, turning reddish, with yellow stamens, not unlike some small *Anemones*; plant smooth. March, April. Italy. 1759. P.

XXVIII. HELLEBORUS, from ἡλλείν, to destroy, and βόρα, food for cattle, in allusion to its poisonous qualities. Nat. ord. *Linn.* Multisiliquæ. Juss. Ranunculaceæ. 8 Species.

1. H. Hyemalis. *Winter Hellebore, or Aconite.* "Flower solitary, sitting in the upper leaf; radical leaves peltate, many cleft;" stems naked, four inches high, terminated by a single leaf, in which sits one upright yellow flower; petals scored with lines, deciduous. January to March. Austria. 1596. P.

2. H. Ni'ger. *Black Hellebore, or Christmas Rose.* "Flower-stalks radical, one or two flowered; leaves pedate," from the root only; on long foot-stalks, dark green; flowers large, concave, white, with a blush-coloured tinge, finally becoming green. January to March. Austria. 1596. P.

3. H. Vi'ridis. *Green Hellebore.* "Leaves digitate; branches leafy, two flowered;" flower-stalks radical, taller than the leaves; floral leaves serrate,

lobed; upper leaves sitting, lower stalked; flowers nodding, green, expanded. March, April. Britain. P.

4. H. Fœtidus. *Stinking Hellebore.* " Stem leafy, many flowered; leaves pedate; lobes lanceolate;" floral leaves entire; stem about two feet high, branched, enveloped in tufts of dark leaves; flowers cup-shaped, green, smaller. February, March. England. E. P.

5. H. Li'vidus. *Great three-leaved Hellebore.* " Stem many flowered, leafy; leaves ternate;" leaflets ovate; stem and foot-stalks purplish: plant glaucous, livid; flowers large, green, expanded. January to May. Native country unknown. 1710. P.

6. H. Trifo'lius. *Small three-leaved Hellebore.* " Stalk one flowered; leaves ternate;" stem leafless; flower minute, white or greenish yellow. The habit of this plant is so unlike the rest of the Hellebores as to induce some late botanists to erect it into a separate genus, by the name of *Coptis.* June, July. Canada. 1782. P.

The Hellebore of the ancients, so much celebrated in maniacal cases, was long thought to be the H. Niger, but a late modern traveller in Greece, Dr. Sibthorp, discovered a different species, which more resembles the description of Dioscorides, and which he has named H. Officinalis: the roots are the parts used in medicine, and are found to produce most violent effects. The first species has a pretty appearance in gardens when intermixed with the Snow-drop, as they blossom together at the same early period of the year.

xxix. CAL'THA, supposed from *καλάθος*, a basket : alluding to the shape of the flower. Nat. ord. *Linse.* Multisiliquæ. Juss. Ranunculaceæ. 2 Species.

1. *C. Palus'tris. Marsh Marygold.* " Stem erect, leafy ; leaves round, heart-shaped," or between that and kidney-shaped, acutely crenate, smooth, stalked : flowers large, golden, axillary, solitary, on peduncles : the young buds are pickled as a substitute for capers ; corolla often double. April, May. Britain. P.

xxx. ANEMO'NE, from *ἀνέμος*, the wind ; because it flourishes in exposed situations. Nat. ord. *Linn.* Multisiliquæ. Juss. Ranunculaceæ. 29 Species.

* *Hepaticæ. Flowers having a sort of calyx.*

1. *A. Hepa'tica.* " Leaves three lobed, quite entire," veined, involucre three leaved, remote from the flower ; the leaves of the year before remain ; peduncles three, one flowered ; corolla white, variegated blue, red, in every shade of colour, often double, continuing longer than the single flowers. February to April. Europe. 1573. P.

** *Pulsatillæ. Peduncle with an involucre, seeds tailed.*

2. *A. Pa'tens. Woolly-leaved Anemone.* " Leaves digitate, many cleft," the middle leaflet three cleft, side leaflets two cleft ; stalk one flowered, shorter than the leaves ; involucre remote, woolly ; corolla

white, woolly underneath; stamens yellow. July. Siberia. 1752. P.

3. A. Verna'lis. *Parsley-leaved Spring Anemone.* "Leaves pinnate; flowers erect;" leaflets three cleft, obtuse, smooth; stem about six inches high, with a shining, yellow, woolly, finely cut involucre; flowers red without and hairy, white within. April. Germany. 1752. P.

4. A. Pulsatil'a. *Pasque Flower.* "Leaves twice pinnate; petals of the corolla straight;" involucre close to the flower, many cleft, with the divisions linear, woolly; corolla purple, sometimes white, or double; stalks from six to eight inches high, woolly, one flowered; leaflets finely cut. April, May. England. P.

A. Pratensis, or Meadow Anemone, is scarcely more than a variety of this, with darker petals reflected at the tips.

5. A. Alpi'na. *Alpine Anemone.* "Stem leaves ternate, connate, smooth, more than doubly compound; leaflets wing cleft, obtuse, with seeds hairy, tailed;" stem leaves woolly at the base; flowers large, white, with a tinge of purple; pubescent on the outside. July. Switzerland. 1658, P.

*** *Anemones, stems leafy, seeds without tails.*

6. A. Corona'ria. *Narrow-leaved or Poppy Anemone.* "Radical leaves ternate, doubly compound, with pointed teeth; involucre leafy; seeds woolly;"

stem about nine inches high; flowers commonly double, white, red, purple, lilac, or blue, of all shades, or striped and variegated in endless diversity. April, May. The Levant. 1596. P.

7. A. Hortensis. *Broad-leaved or Star Anemone.* "Radical leaves digitate; leaflets three cleft; stem leaves in threes, lanceolate, connate; seeds woolly;" flowers when single with petals thrice three, marked with lines, somewhat hairy outside; but as in the last species they are usually double of all colours, stripes and variegations. April. Italy. 1597. P.

8. A. Sylvestris. *Large white flowered or Snow Drop Anemone.* "Stem two flowered, leafy; leaves three parted; divisions three cleft, toothed; seeds roundish, woolly; stigma remaining;" stem leaves more finely divided than the root leaves; flowers large, white. April, May. Germany. 1596. P.

9. A. Virginiana. *Virginian Anemone.* "Stem many flowered, leafy; leaves three-parted; divisions three cleft, acuminate, toothed; petals acute; seeds hairy; with a short permanent style;" petals green; flower-stalks long; seeds shaggy. May, June. North America. 1722. P.

10. A. Dicotoma. *Forked Anemone.* "Stem forked; all the leaves sessile, opposite, clasping the stem, three cleft, cut;" stem a foot high, pubescent; flower-stalks from the forks, one flowered; petals purplish underneath; anthers tawny. May, June. Canada. 1768. P.

11. A. *Pennsylvanica*. *Pennsylvaniae Anemone*. "Stem forked; leaves sessile, stem-clasping, the lowest ternate, three cleft, gashed;" differs from the former in having three leaves at the first forking of the stem, not two; more veined; corolla white; anthers yellow. May, June. North America. 1768. P.

12. A. *Trifolia*. *Three-leaved Anemone*. "Stem one flowered; stem leaves twice ternate; leaflets ovate, entire, serrate;" stem round; leaf stalks red at the base; leaves tinged with red, toothed; peduncles one flowered; petals six, elliptic, white; stamens white, numerous. April, May. France. 1597. P.

13. A. *Nemoro'sa*. *Wood Anemone*. "Stem one flowered; stem leaves twice ternate; leaflets lanceolate, three cleft, toothed;" corolla of six petals, white, tinged on the outside with purple; stem pubescent, bearing one leaf and one flower; flower-stalk a continuation of the stem. March to May. Britain. P.

14. A. *Apennina*. *Blue Mountain Anemone*. "Stem one flowered; stem leaves twice ternate; leaflets lanceolate, gashed, toothed; corolla of many petals," from twelve to fifteen, disposed in three rows, oblong, sweet smelling, pale blue; root leaves on long stalks; flower-stalk purple; plant somewhat hairy. March, April. England. P.

15. A. *Ranunculoides*. *Yellow Wood Anemone*. "Stem usually two flowered; stem leaves twice ternate; leaflets commonly three cleft, toothed at the

apex; petals oblong, obtuse, flat," yellow; peduncles downy, short; leaves few, sometimes in fives; seeds acute. March, April. England. P.

16. A. *Narcissiflora*. *Narcissus flowered Anemone*. "Flowers umbelled, with a palmate involucre; its lobes acutely cleft; radical leaves palmate; lobes two or three cleft, toothed;" all the leaves soft, hairy; flowers from six to eight; petals in each six or seven, white within, reddish without, forming a salver-shaped corolla; seeds large, round, naked. May. Austria. 1773. P.

17. A. *Thalictroides*. *Meadow Rue-leaved Anemone*. "Flowers umbelled; stem leaves simple, in whorls; root leaves twice ternate," on long stalks; leaflets somewhat heart-shaped; corolla white; petals ovate, obtuse, spreading. April, May. North America. 1768. P.

The Hepatica is one of the chief beauties of the Spring, and the Garden Anemones, Nos. 6 and 7, have been long the pride of the florist. A Double Anemone, in order to be fine, should have a strong upright stem; the flower from two to three inches in diameter; the outer petals firm, horizontal, with the ends a little turned up, and the smaller petals lying gracefully over each other; the plain colours should be brilliant and striking; the variegated flowers with distinct and clear divisions. Many of the single species are distinguished by their simple and elegant beauty.

XXXI. *TROL'LIUS*, named by Gessner, who took

an old German word, *trol*, round, in allusion to the shape of the flower, and gave it a Latin termination. Nat. ord. *Linn.* Multisiliquæ. *Juss.* Ranunculaceæ. 2 Species.

1. *T. Europæus.* *European Globe Flower.* "Petals closely converging; nectaries the length of the stamens;" stem erect, about two feet high, round, leafy, branched; leaves deeply divided into many wedge-shaped, toothed, spreading lobes; flowers solitary, erect, globular, bright yellow. May, June. Britain. P.

2. *T. Asia'ticus.* *Asiatic Globe Flower.* "Petals spreading; nectaries of nearly equal length;" a hardy but not common plant in gardens, somewhat larger than the foregoing; leaves of a lighter green, with fewer segments; petals orange-coloured; nectaries still deeper coloured; flowers more open. May, June. Siberia. 1759. P.

XXXII. ANNO'NA. The native American name; but the Latin word *annona* signifies victuals or provisions, and consequently is not inapplicable. Nat. ord. *Linn.* Coadunatæ. *Juss.* Anonæ. 18 Species.

1. *A. Trilo'ba.* *Three cleft fruited Custard Apple.* "Leaves elliptic, acute, smooth; flowers pendulous, bell-shaped; calyxes ovate; petals many, oval;" a tree from ten to twelve feet high; bark smooth; blossoms greenish, or rusty purple; fruit in clusters, at first green, yellow when ripe, luscious; all the parts

of the tree have a rank disagreeable smell. May to August. North America. 1796. T.

This species is by some called the Papaw Tree; the other species of the genus being tropical plants, can only be raised here in the stove, regulated to a pine apple heat.

XXXIII. LIBIODEN'DRON, from *λιβύης*, a lily, and *δρόν*, a tree. Nat. ord. Linn. Coadunatae. Juss. Magnoliae. 4 Species.

1. L. Tulipifera. *Common Tulip Tree.* "Leaves three lobed, truncate; calyx three leaved;" a large tree; leaves stalked; the middle lobe appearing as if it had been cut across by scissars; flowers at the end of the branches, variegated with green, yellow, and orange, resembling a small tulip; a tree of singular beauty, and now not uncommon: in America it will grow to the height of seventy feet, where it is vulgarly called a poplar. June, July. North America. 1663 T.

XXXIV. MAGNO'LIA, in honour of Peter Magnol, Professor of Botany at Montpelier; died 1715. Nat. ord. Linn. Coadunatae. Juss. Magnoliae. 8 Species.

1. M. Grandiflora. *Laurel-leaved Magnolia.* "Leaves perennial, leathery, oblong; petals of the corolla obovate;" leaves scattered on short thick stalks, smooth, shining, bright green, veiny; flowers solitary, terminal, on thick downy stalks, very large; white, fragrant; a variety with rusty leaves, and smaller flowers, blossoms at an earlier age; this

noble evergreen tree flowers from June to September. North America. 1734. E. T.

2. M. *Glau'ca.* *Swamp Magnolia.* "Leaves elliptic, oblong, obtuse, glaucous beneath; petals of the corolla obovate;" a tree about fifteen feet high; flowers at the end of the branches cream-coloured, concave, of a rich vinous fragrance; leaves bright green above, somewhat silky beneath; the young plants frequently retain their leaves through the winter. June to September. North America. 1688. T.

3. M. *Conspicua.* *Lily flowered Magnolia, or Youlou.* "Leaves obovate, obtuse, with a point, appearing after the flowers are over;" a tree with zigzag divided branches, at the end of which, before the leaves, appear white lily-like flowers, elegant and fragrant; the leaves expand in May; it flowers from February to April. China. 1789. T. Gr. Ho.

4. M. *Acumina'ta.* *Blue Magnolia.* "Leaves obovate, oblong, pointed, downy beneath; petals more than six, channeled, glaucous;" a large umbageous tree; leaves at first clustered at the end of each branch, afterwards alternate; flowers amidst the young leaves, with glaucous sea-green petals. May, June. North America. 1736. T.

5. M. *Tripetala.* *Umbrella Magnolia.* "Leaves lanceolate; petals of the corolla nine, the three outermost reflexed, and hanging down;" a tree from sixteen to twenty feet high; leaves smooth, light green, tapering at each end, of a large size, eighteen inches

long or more, spreading somewhat in the form of an umbrella at the end of each branch; flowers large, white, upright, of a faint sweetness. May, June. Carolina. 1752. T.

6. M. Auricula'ta. *Ear-leaved Magnolia.* "Leaves spatulate or spoon-shaped, ovate, acute, heart-shaped at the base, smooth beneath; petals of the corolla obovate;" a tree of the same habit as the preceding, distinguished by the lobes at the base of the leaves; flowers large, yellowish white, extremely fragrant. July, August. Carolina. 1786. T.

The first evergreen species, when well grown, is one of the most beautiful trees in nature, both in its manner of growth and in the luxuriance of its noble leaves, which render it conspicuous at all seasons; the other sorts are also highly ornamental, either in shrubberies or planted alone.

xxxv. RANUN'CULUS, diminutive of *rana*, a frog; some species growing in watery places frequented by those animals. Nat. ord. *Linn.* Multisiliquæ. *Juss.* Ranunculaceæ. 61 Species.

* *With leaves simple.*

1. R. Flam'mula. *Lesser Spear Wort.* "Leaves egg lance-shaped, bluntish, stalked; stem declining;" spreading in every direction; leaves ribbed; flowers numerous, solitary, on long stalks, bright yellow. June to September. Britain. P.

2. R. Lin'gua. *Great Spear Wort.* "Leaves lance-

oblate, pointed; stem erect, many flowered;" thrice the size of the last; leaves somewhat sessile; calyx hairy, as is the whole herb, more or less; flowers large, brilliant, yellow. June to August. Britain. P.

3. R. Gramineus. *Grass-leaved Crow Foot.*
"Leaves linear, lanceolate, glaucous, many ribbed; sessile, stem erect, smooth, few flowered;" flowers large, golden; calyx smooth, spreading, not bent back. April to June. Wales. P.

4. R. Parnassifolius. *Parnassia-leaved Crow Foot.*
"Leaves many ribbed, radical ones roundish, ovate, somewhat heart-shaped, on long stalks; stem leaves egg lance-shaped, sessile;" flowers large, white, brilliant; calyx rose-coloured; stalks woolly. June, July. The Alps. 1769. P.

5. R. Amplexicanlis. *Plantain-leaved Crow Foot.*
"Leaves ovate, pointed, glaucous, clasping the many flowered stem," which is erect, leafy, branched above; leaves fringed with soft hairs; calyx green, smooth, concave, membranous at the edge; petals of a pure and brilliant white. April, May. The Apennines. 1633. P.

6. R. Ficaria. *Pile Wort, or Lesser Celandine.*
"Leaves heart-shaped, angular, smooth, stalked; petals numerous;" stems leafy, mostly one flowered; leaves shining; calyx leaves three or five; petals eight or ten, polished, bright yellow; flower sometimes double. April. Britain. P.

7. R. Thora. *Kidney-leaved Crow Foot.* "Leaves

kidney-shaped, abrupt, crenate, netted, radical ones on long stalks; stems one or two flowered; stem solitary, smooth, simple; flowers on long stalks, golden; calyx leaves lanceolate; root tapering, fibrous, highly poisonous; with the juice of which the Swiss hunters of wild beasts used formerly to envenom their darts. May, June. The Alps. 1710. P.

*** With leaves dissected and divided.*

8. R. Aconitifolius. *Aconite-leaved White Crow Foot, Fair Maids of France.* "Leaves veiny, smooth, five lobed, middle lobe three cleft; floral leaves sessile, digitate;" stem branched, many flowered, smooth, somewhat purplish; leaves dark green, with a glistening hue beneath; flowers white, commonly double; calyx violet. May, June. The Alps. 1596. P.

R. Platanifolius, or *Plane Tree-leaved Crow Foot.* seems to be a variety of this, with the lobes of the leaves broader.

9. R. Illyricus. *Illyrian Crow Foot.* "Leaves ternate; leaflets linear, lanceolate, entire, shaggy with silk hairs; calyx silky, reflexed;" stem branched; whole plant woolly; flowers lemon colour. May, June. South of Europe. 1596. P.

10. R. Asiaticus. *Persian Crow Foot, or Garden Ranunculus.* "Leaves once or twice ternate; leaflets three cleft, cut; stem hairy, branched;" from twelve to fifteen inches high, erect, leafy, bearing from three to five long stalked flowers; in their wild

and single state of a vivid crimson, occasionally varying to yellow; but when cultivated of different colours, purple, red, orange, yellow, white, or with various stripes; calyx brown, reflected. May, June.

The Levant. 1596. P.

11. R. Rutaefolius. *Rise-leaved Crow Foot.*
Leaves pinnate and ternate; leaflets three parted, many cleft; stem nearly simple; petals numerous; root tuberous; a plant smooth and glaucous; leaves stalked, elegantly divided; flowers white, tinged with red, on long stalks. May to July. Austria. 1759. P.

12. R. Glacia'lis. *Alpine tiny flowered Crow Foot.*
Leaves ternate, three cleft, cut; segments elliptical; stem nearly simple; calyx very hairy; stem from three to six inches high; leafy near the top, bearing one or two flowers on long smooth stalks; flowers large, white, but purplish beneath; calyx purplish brown, very rough, with shining tawny hairs. June to August. Lapland. 1775. P.

13. R. A'cris. *Upright Crow Foot, Yellow Bachelor's Buttons.* " Flower-stalks round; calyx spreading;" leaves in three deep, wedge-shaped, many cleft, jagged lobes; the lateral lobes deeply divided; stem erect, many flowered, scored, hairy; leaves hairy; upper leaves linear; flowers yellow, in gardens double. June, July. Britain. P.

14. R. Bulbo'sus. *Bulbous Crow Foot Buttercup.* " Calyx reflected; flower-stalks furrowed; stem many flowered; leaves ternate;" three cleft, cut,

hairy, stalked : flowers yellow : admitted into gardens only when double ; calyx bent back quite to the stalk. May, June. Britain. P.

15. *R. Lanugino'sus*. *Broad-leaved Woolly Crow Foot*. " Calyx spreading ; flower-stalks round ; leaves heart-shaped, lobed, five cleft, notched, silky ; stem erect, many flowered, hairy :" the silky soft leaves distinguish this plant from the other species ; flowers yellow, much like those of *R. Acris*. July. South of France. 1683. P.

16. *Aqua'tilis*. *Water Crow Foot*. " Leaves growing under water, capillary, above the water somewhat peltate ;" stamens numerous ; stems long, round, branched, leafy ; leaves stalked, the uppermost floating, peltate, with blunt notches ; sometimes all the leaves are capillary, and very long ; flowers floating on long stalks opposite to the leaves ; petals white, with yellow claws ; making a handsome show in ponds. April to August. Britain. P.

Of this very numerous genus fifteen species are natives of Britain, seven of which are noticed above ; they are not, however, often seen in gardens, except *R. Acris*. Several foreign species, of no great figure, have been introduced from time to time, but most of them seem to be now lost. *R. Aconitifolius* is commonly met with, and is a flower of great elegance ; but the Persian *Ranunculus* seems to have drawn away the attention from all other species by its brilliancy ; it is the rival of the Garden Anemone, and like that, presents an almost infinite variety of colours. A fine flower is hemispherical, the

petals broad, numerous, gradually diminishing in size to the centre of the flower, lying regularly over each other, and having more of a perpendicular than a horizontal direction; their colours dark and clear, plain, or elegantly mottled, striped, and variegated.

XXXVI. ADO'NIS, the youth beloved of Venus.
Nat. ord. *Linn.* Multisiliquæ. *Juss.* Ranunculaceæ.
8 Species.

1. A. *Aestiva*'lis. *Tall Adonis.* "Flowers five petaled; seeds ovate;" flowers red; petals narrower, smaller than in the next species, of which, by most writers, it is esteemed only a variety. June, July. South of Europe. 1629. A.

2. A. *Autumna*'lis. *Corn Adonis, Pheasant's Eye, Red Morocco.* "Flowers eight petaled; seeds cylindrical;" stem about a foot high, angular, hollow, purplish, branched; leaves alternate, lower ones stalked, upper sessile, all more than doubly compound; segments capillary, pointed; petals eight, scarlet, internally black at the bottom, greenish outward; anthers dark, coloured. May to October. Britain. A.

3. A. *Verna*'lis. *Spring Adonis.* "Flowers twelve petaled; heads of seeds ovate;" stem branched, hairy, scored; leaves, the nearer they approach the top of the stem, the more decompounded; flower-stalks terminating, one flowered; petals large, yellow. March, April. Bohemia. 1629. P.

divided, diverging; stamens projecting between the divisions.

IX. AJUGA. Upper lip of the corolla very small, notched; stamens longer than the upper lip.

X. PHLOMIS. Calyx angular; upper lip of the corolla incumbent, compressed, rough with shaggy hairs, notched; lower lip three cleft; the middle segment largest; stigma cloven, its upper segment shorter.

XI. LEONURUS. Calyx pentagonal; upper lip of the corolla concave, hairy, undivided; lower lip in three deep, rather unequal segments; anthers with parallel lobes and shining dots; stigmas equally divided.

XII. BETONICA. Calyx awned; upper lip of the corolla ascending, flattish; tube cylindric.

XIII. LAMIUM. Calyx five cleft, with spreading bristle-pointed teeth; upper lip of the corolla vaulted, lower lip two lobed; throat inflated, toothed on each side.

XIV. GALEOPSIS. Calyx five cleft, awned; upper lip of the corolla notched, vaulted; lower lip of the corolla with two teeth on the upper side.

XV. STACHYS. Calyx five cleft, awned; upper lip of the corolla vaulted, lower lip reflected at the sides; its middle segment largest, notched; stamens when fading reflected towards the sides.

XVI. NEPETA. Lower lip of the corolla in three segments; the middle segment notched; throat re-

flexed at the margin; stamens approaching each other.

XVII. SATUREIA. Segments of the corolla nearly equal; stamens distant; calyx almost equally five cleft.

XVIII. BALLOTA. Calyx salver-shaped, five-toothed, ten streaked; upper lips of the corolla crenate, concave.

XIX. MARRUBIUM. Calyx salver-shaped, rigid; ten streaked; upper lip of the corolla cloven, linear, straight.

XX. MOLUCELLA. Calyx bell-shaped, widening; broader than the corolla, with spinous teeth.

2. *Calyxes two lipped.*

XXI. SCUTELLARIA. Rim of the calyx nearly entire, closed; after flowering covered with a lid.

XXII. THYMUS. Calyx two lipped, its mouth closed with hairs; upper lip of the corolla flat, notched.

XXIII. OCIMUM. Upper lip of the calyx roundish, lower four cleft; corolla reversed, one lip four cleft, the other undivided; outer stamens furnished with a process at their base.

XXIV. PRUNELLA. Filaments forked, one point of each fork bearing an anther; stigma two cleft.

XXV. CLEONIA. Stigma four cleft; filaments forked; one point of each fork bearing an anther.

XXVI. TRICHOSTEMA. Upper lip of the corolla sickle-shaped; stamens very long.

XXVII. DRACOCEPHALUM. Corolla with an inflated throat; upper lip concave.

XXVIII. ORIGANUM. Involucre composed of ovate coloured leaves, tiled in a four cornered spike; upper lip of the corolla erect, flat; lower lip in three deep equal segments.

XXIX. CLINOPODIUM. Floral leaves bristly, numerous; forming an involucre under the whorl, or head of flowers.

XXX. MELITTIS. Calyx unequal, much wider than the tube of the corolla; upper lip of the corolla flat, lower three lobed, crenate; anthers forming a cross.

XXXI. MELISSA. Calyx dry, flattish on the upper side; its upper lip with three level pointed teeth; upper lip of the corolla somewhat vaulted, cloven; middle lobe of the lower lip heart-shaped.

XXXII. PHRYMA. Calyx two-lipped, five toothed; seed solitary.

Order Angiospermia.

1. *Calyx two cleft.*

XXXIII. ACANTHUS. Calyx two leaved, two cleft; one lip of the corolla bent down, three cleft; capsule two celled.

2. *Calyxes four cleft.*

XXXIV. BARTSIA. Calyx two lobed, notched, coloured; corolla less coloured than the calyx, upper lip longest; capsule two celled.

XXXV. EUPHRASIA. Calyx cylindrical, four

toothed, equal; upper lip of the corolla cloven, lower three lobed; the lobes cloven; anthers bearded with unequal spines; capsules ovate.

XXXVI. RHINANTHUS. Calyx inflated; upper lip of the corolla compressed; capsule two celled, blunt, compressed.

XXXVII. MELAMPYRUM. Calyx tubular, four cleft; upper lip of the corolla compressed, folded back at the margin; capsule of two cells, oblique, bursting at the base.

3. *Calyxes five cleft.*

XXXVIII. LINDERNIA. Calyx deeply five cleft; corolla ringent; upper lip short; the two inferior stamens having a terminating tooth; capsule one celled.

XXXIX. SCROPHULARIA. Corolla nearly globular, reversed; capsule superior, two celled.

XL. CELSIA. Corolla wheel-shaped; filaments bearded; capsule two celled.

XLI. SIBTHORPIA. Corolla five cleft, irregular; stamens spreading remotely in pairs; capsule compressed, inversely heart-shaped, two celled, with transverse partitions.

XLII. DIGITALIS. Calyx in five deep segments; corolla bell-shaped, five cleft, inflated; capsule ovate, of two cells, with many seeds.

XLIII. BIGNONIA. Calyx cup-form; corolla five cleft, bellying beneath; throat bell-shaped; siliques two celled; seeds winged, membranous.

XLIV. BUCHNERA. Calyx five toothed; corolla funnel-shaped; border five cleft, nearly equal; lobes heart-shaped; stamens unequal; capsule two celled.

XLV. ERINUS. Border of the corolla in five equal notched segments; capsule of two cells; seeds numerous.

XLVI. ANTIRRHINUM. Calyx five leaved; corolla with the base produced downwards, and nectariferous; capsule two celled.

XLVII. GERARDIA. Corolla two lipped, the lower lip in three deeply notched lobes, the middle one very much divided; capsule two celled, opening at the base.

XLVIII. PEDICULARIS. Calyx swelling, unequally five cleft; upper lip of the corolla notched, compressed; capsule of two cells, pointed, oblique.

XLIX. MIMULUS. Calyx five toothed, prismatic; corolla ringent; the upper lip folded back at the sides; capsule two celled, many seeded.

L. DODARTIA. Calyx with five teeth; lower lip of the corolla twice as long as the upper; capsule globose, of two cells, with many seeds.

LI. CHELONE. Corolla ringent, bellying; rudiment of a fifth filament, smooth; capsules two.

LII. PENTSTEMON. Corolla inflated, two lipped; rudiment of a fifth filament bearded in its upper part; capsule two celled.

LIII. SESAMUM. Corolla bell-shaped; border

five cleft, lowest segment largest; a rudiment of a fifth filament: stigma lanceolate; capsule four celled.

LIV. LINNÆA. Calyx double; that of the seed four leaved; that of the flower five parted, superior; corolla bell-shaped; berry dry, three celled.

LV. VITEX. Border of the corolla six cleft, two lipped; middle segment of the lower lip largest; drupe inclosing a nut of four cells.

LVI. CYMBARIA. Calyx ten toothed; capsule heart-shaped, two celled.

LVII. VERBENA. Corolla funnel-shaped, curved, rather unequal, widening at the top, stamens within the tube; seeds two or four, naked.

LVIII. MELIANTHUS. Calyx of five leaves, the lower one gibbous; petals of the corolla four; nectary beneath the lowest petal; capsule four celled.

CLASS XIV.

DIDYNAMIA.

Order Gymnospermia.

I. PERIL'LA. Derivation and meaning unknown.
Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 1
Species.

1. P. Ocymoïdes. *Balm-leaved Perilla.* Stem
erect, herbaceous, branched, three feet or more high,

quadrangular, furrowed, purple when old, hairy; leaves opposite, ovate, stalked, rough; flowers in spikes at the end of the stem and branches, pointing one way, hairy, white; plant of a balmy fragrance. August. India. 1770. A.

II. GLECHO'MA, perhaps from γλυκύ, sweet wine, as affording a pleasant juice. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 1 Species.

1. G. Hedera'cea. *Ground Ivy, Ale-herb, Gill.* Leaves kidney-shaped, crenate, stalked, dotted beneath with glandular points; flowers axillary, about three to each leaf, speckled with white and blue: before the introduction of Hops its leaves were used for clarifying ale; it is still in favour as a sweetener of the blood in Spring. April, May. England. P.

III. HYSPO'PUS, from νείν, to rain, and οὐ, the countenance, the dust of the plant when dried and pulverized being used in the sacrifices of the Greeks, for sprinkling the head and eyes. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 4 Species.

1. H. Officinalis. *Common Hyssop.* "Spikes all leaning in the same direction; leaves lanceolate;" stem about eighteen inches high, shrubby, at first square, then round; leaves sessile, the lower ones in pairs; flowers in whorls, axillary, blue, varying to red or white; plant of an aromatic smell. June to September. South of Europe. 1548. S.

2. H. Lophan'thus. *Mint-leaved Hyssop.* "Corollas reversed; lower stamens shorter than the corolla; leaves heart-shaped," rough, pale on the under side; clusters of four or five purple flowers at each joint of the stem; tube of the corolla longer than the calyx. August. Siberia. 1762. P.

3. H. Nepeto'ides. *Square-stalked Hyssop.* "Stem sharply quadrangular; flowers in close whorls; leaves ovate;" stem erect, about four feet high; leaves obliquely cordate, serrate, acute, on short stalks; flowers yellow, in thick, close, longish spikes. August to October. North America. 1692. P.

The first species has an aromatic smell, and a moderate warm bitterish taste: it has been long esteemed in asthmatic affections, taken in an infusion sweetened with honey; it is also commended by way of fomentation in cases of bruises from falls. Whether it be the plant so much spoken of in the Jewish ceremonies seems somewhat uncertain.

IV. ELSHOT'ZIA, in memory of a Prussian Botanist, Elshotz, who published the Flora Marchica, 1668. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 2 Species.

1. E. Crista'ta. *Crested Elshotzia.* "Spikes solitary, erect;" stem square, leafy; leaves stalked; opposite, ovate, serrated, smooth; spikes consisting on one side of a double row of pointed floral leaves, on the other of three or four dense rows of lilac-coloured

flowers. This plant, when dried, has a fragrant scent. May to July. Siberia. 1789. A.

v. **MEN'THA**, perhaps from μένθη, compost, because some species grow on dung-hills. Nat. ord. **Linn.** *Verticillatae*. **Juss.** *Labiatae*. 22 Species.

1. **M. Rotundifo'lia**. *Round-leaved Mint*. "Leaves elliptic, obtuse, rugged, crenate, downy beneath; spikes interrupted, somewhat hairy; flower-stalks lanceolate;" calyx short, bell-shaped, hairy all over, and having long, sharp, coloured teeth; corolla lilac; leaves grass green above; spikes often clustered or panicled; stamens protruded; smell disagreeable, acrid; leaves often variegated, sometimes entirely white. August. England. P.

2. **M. Vi'ridis**. *Spear Mint, Mackerel Mint*. "Leaves sessile, lanceolate, acute, naked; spikes interrupted; floral leaves bristle-shaped, more or less hairy, as well as the teeth of the calyx;" stems erect, sharply angled, purplish; leaves sharply serrated or toothed, occasionally hairy beneath, veined; flower-stalks and base of the calyx smooth; flowers purplish: it varies with leaves broader. August. England. P.

3. **M. Piperita**. *Pepper Mint*. "Leaves stalked, ovate, smoothish; spikes obtuse, interrupted in their lower part; calyx smooth at the base;" its teeth sharp, purple; stem with scattered, reflexed hairs; branches numerous, opposite; leaves with hairy veins;

corolla purplish, smooth, longer than the stamens. August. England. P.

4. M. Cris'pa. *Curled Mint.* "Leaves sessile, heart-shaped, wavy, strongly toothed; spikes headed, blunt; teeth of the calyx and tops of the flower-stalks slightly hairy;" stems but little branched, leafy; leaves numerous, smooth above, slightly hairy beneath; corolla smooth, purplish. July, August. Siberia. 1640. P.

5. M. Odora'ta. *Bergamot Mint.* "Leaves stalked, heart-shaped, naked on both sides; spikes headed, very blunt; calyx and flower-stalks perfectly smooth :" it differs from the other mints by its being destitute of hairs throughout the plant; smell resembling that of the Bergamot Orange; corolla and calyx purplish. July, August. England. P.

6. M. Ru'bra. *Tall Red Mint.* "Flowers whorled; leaves ovate; stem upright, zigzag; flower-stalks and lower part of the calyx very smooth; teeth hairy;" stem tall, smooth, bearing a few branches; leaves stalked, dark, shining, broad, serrated; whorls numerous, of large purplish red flowers, with linear fringed bractes. September. Britain. P.

7. M. Gentilis. *Bushy Red Mint.* "Flowers whorled; leaves ovate; stem much branched, spreading; flower-stalk and base of the calyx smooth :" the whole plant somewhat hairy, low; corolla pale purple: a variety with blotched leaves of a pleasant scent. June to August. Britain. P.

8. M. Gra'ciliis. *Narrow-leaved Mint.* "Flowers

whorled ; leaves lanceolate, nearly sessile ; stem much branched, erect ; flower-stalks and base of the calyx smooth ;" plant somewhat hairy ; stem about eighteen inches high ; leaves bright green, serrated ; corolla purple, bearded at the tip ; smell somewhat resembling Basil. August. Britain. P.

9. M. *Pulegium*. *Penny Royal*. " Flowers whorled ; leaves ovate ; stem prostrate ; flower-stalks downy ; calyx hairy" all over ; teeth fringed ; leaves small, downy, reflexed ; whorls numerous, dense, of purplish flowers, sometimes white ; scent aromatic, sharpish. August, September. Britain. P.

10. M. *Cervina*. *Hyssop-leaved Mint*. " Flowers whorled ; floral leaves palmate ; leaves linear ; calyx and flower-stalks smooth ;" under side of the leaves dotted ; whorls large, dense, many flowered ; flowers purplish, sometimes white ; calyx ribbed, and having spinous teeth ; stamens projecting from the corolla. June to August. France. 1648. P.

All the species of this genus are subject to numerous varieties, and their appearance so often intrudes upon each other that it becomes a matter of great nicety to distinguish them. The pubescence of the calyx and the flower stalks, and its direction have been found of considerable service for this purpose. M. *Viridis* is the sort preferred for culinary purposes. Pepper Mint and Penny Royal have been long held in estimation for affording their warm and pungent qualities by infusion and distillation, and their consequent use in a variety of disorders connected with indigestion.

VI. *SIDERITIS*, so named from *σίδηρος*, iron, on account of its fancied property in healing wounds. Nat. ord. *Linn.* *Verticillatae*. *Juss.* *Labiatae*. 20 Species.

1. *S. Can'dicans*. *Mullein-leaved Iron Wort*. "Shrubby and downy; leaves densely downy, ovate, lanceolate, taper pointed, heart-shaped at the base, snow white beneath; spikes compound; whorls remote, of about eight flowers;" calyx obtuse, pointless, woolly; flowers whitish. April to July. *Ma-deira*. 1714. S. Gr. Ho.

2. *S. Monta'na*. *Mountain Iron Wort*. "Herbaceous, decumbent, hairy; leaves deflexed, spinous, pointed; calyx teeth spreading, spinous, nearly uniform;" stem a foot long, diffuse, leafy; leaves ovate, concave, green; flowers about six in a whorl; tube of the corolla yellow, border brown. July. *Italy*.

1752. A.

3. *S. E'legans*. *Dark-flowered Iron Wort*. "Herbaceous, diffuse, hairy; leaves elliptical, obtuse, crenate, without spines; calyx teeth spreading, spinous, hairy, nearly uniform;" whorls axillary, six flowered; corolla with a white tube and black lips; calyx invested with long silk hairs. July. *Egypt*.

1787. A.

4. *S. Roma'na*. *Simple-beaked Iron Wort*. "Herbaceous, decumbent, hairy; calyx teeth spinous, the uppermost largest, solitary, ovate;" leaves hoary, oblong, acute; tube and upper lip of the corolla pale

red, lower lip white, dilated. June to August. Italy.
1740. A.

5. S. *Perfolia'ta*. *Perfoliate Iron Wort*. "Herbaceous; rough with bristly hairs; upper leaves ovate, lanceolate, obscurely toothed, clasping the stem; floral leaves heart-shaped, pointed, fringed;" flowers six in a whorl, white with reddish veins; calyx tubular, glandular, and hairy; teeth spinous. August to November. The Levant. 1731. P.

6. S. *Inca'na*. *Lavender-leaved Iron Wort*. "Somewhat shrubby, downy, hoary; leaves linear, lanceolate, entire; floral leaves ovate, palmate, with spinous teeth;" whorls distant, four or five in each spike of yellow, white, or pale blue flowers; calyx cottony. July, August. Spain. 1752. S.

7. S. *Hyssopifo'lium*. *Hyssop-leaved Iron Wort*. "Leaves lanceolate, smooth, entire; floral leaves heart-shaped, with spinous teeth as long as the calyx;" stems somewhat woody; branches rather square; leaves numerous, opposite; stalks green; whorls crowded into an oblong terminal spike; corolla straw-coloured. June to November. Italy. 1597. P.

8. S. *Scordioi'des*. *Scollop-leaved Iron Wort*. "Leaves lanceolate, somewhat hairy, distantly toothed; floral leaves ovate, with spinous teeth, as long as the calyx;" nearly resembling the last, usually a larger plant; leaves more toothed; corolla yellow. August to November. South of France. 1597. P.

9. S. Hirsuta. *Hairy Procumbent Iron Wort.*
 "Leaves oblong, obtuse, strongly toothed; floral leaves with spinous teeth; stem hairy all round, decumbent at the base;" a plant much akin to the last two; leaves with plaited wrinkles; whorls remote, sessile, six flowered; corolla yellow. July. South of Europe. 1731. P.

VII. LAVAN'DULA, from *lavando*, to wash, from its use in fomentations and baths. Nat. ord. *Linn.* Ver-ticillatæ. *Juss.* Labiatæ. 8 Species.

1. L. Spi'ca. *Common Lavender.* "Leaves linear, lanceolate; spike interrupted, naked at the summit;" leaves numerous, hoary, varying from linear to lanceolate, inclining to ovate; stem shrubby, much branched; corolla blue, varying to white. July to September. South of Europe. 1568. S.

2. L. Stæ'chas. *French Lavender.* "Leaves linear, revolute, hoary; spike close, crowned with a coloured leafy tuft; floral leaves somewhat three lobed;" stem shrubby, about two feet high; branches terminated by scaly spikes of purple flowers, with a tuft of purple leaves: the whole strongly aromatic. May to July. South of Europe. 1562. S. Gr. Ho.

The fragrant smell of Lavender is well known, and is to most persons agreeable. The essential oil and distilled water are so generally used in perfumery as to have become an important article in commerce. The spirituous tincture, under the name of Lavender drops, taken upon

sugar, is very commodious for those who wish to indulge in a dram under the appearance of a medicine.

VIII. TEU'CRIUM, from its discoverer, *Teucri*, the Trojan Prince, son of Scamander. Nat. ord. *Linn.* Verticillatae. *Juss.* Labiatæ. 64 Species.

1. *T. Orientale*. *Great-flowered Germanander*. "Leaves many cleft, linear; clusters terminal, compound; flower-stalks horizontal, longer than the floral leaves;" flowers numerous, of a light purplish blue: the whole plant, even the corolla, is downy. July, August. The Levant. 1752. P.

2. *T. Bo'trys*. *Cut-leaved Annual Germanander*. "Leaves many cleft; flowers axillary, opposite, in pairs, turned one way; calyx tubular, inflated, and gibbous at the base;" leaves deeply wing-cleft, somewhat three lobed; flowers stalked, crimson, making a sort of half whorl. July to September. South of Europe. 1633. P.

3. *T. Fru'ticans*. *Tree Germanander*. "Leaves ovate, lanceolate, entire, snow white, cottony beneath; flowers axillary, solitary; segments of the calyx ovate, cottony;" stem shrubby, bushy; branches downy; upper side of the leaves dark green, smooth; flowers large, of a fine blue. June to September. Spain. 1640. S. Gr. Ho.

4. *T. Ma'rum*. *Marum Germanander, or Cat Thyme*. "Leaves ovate, acute, entire, stalked, cottony beneath; flowers clustered, in pairs, turned one way;"

stem bushy, low, with round hoary branches; flowers crimson; whole plant of a remarkably pungent scent, grateful to cats. July to September. Spain. 1840. S. Gr. Ho.

5. T. Canaden'se. *Nettle-leaved Germander.* "Leaves ovate, lanceolate, stalked, sharply serrate, downy on both sides; cluster terminal, dense, somewhat whorled; stem erect;" the habit of the plant resembles a Spiked Veronica; calyx bell-shaped, in five broad segments; corolla purple. August. North America. 1768. P.

6. T. Scorodo'nia. *Wood Germander, Wood Sage.* "Leaves heart-shaped, serrate, stalked, hairy; stem erect; flowers leaning to one side, in lateral and terminal clusters;" plant with a strong scent like hops, in place of which it has been used; corolla pale yellow; stamens purple. July. Britain. P.

7. T. Scordium. *Water Germander.* "Leaves oblong, sessile, with tooth-like serratures; flowers axillary, stalked, in pairs; stem procumbent," four cornered; flowers purple; calyx woolly; herb very bitter, with a garlic-like scent. July. England. P.

8. T. Chamaëdrys. *Wall Germander.* "Leaves nearly ovate, stalked, deeply crenate; flowers axillary, three together, stalked; stem round, hairy," bushy, somewhat shrubby; leaves of a shining green, slightly hairy; flowers crimson, numerous. May to August. England. P.

9. T. Lu'cidum. *Shining Germander.* "Leaves

ovate, stalked, deeply crenate, smooth, shining; flowers axillary, three together, stalked; stems square, erect, smooth;" flowers large, crimson, in numerous whorls. June to September. South of Europe.

1730.

10. T. *Flavum*. *Yellow Shrubby Germander*. "Leaves ovate, crenate, downy; whorls six flowered, in terminal clusters, with ovate, entire, floral leaves;" stem shrubby, downy; branches leafy; flowers pale yellow; upper segments edged with red. July to September. South of Europe. S. Gr. Ho.

11. T. *Montanum*. *Mountain Germander*. "Corymbs terminal; leaves linear, lanceolate, somewhat entire, cottony beneath; calyx veined, ten ribbed, slightly downy, with spinous teeth;" a dwarf bushy shrub; flowers in dense, sessile, solitary corymbs; calyx tubular, pale; corolla buff-coloured. T. *Supinum* seems to be a smaller and hardier variety of this. July to October. France. 1710. S. Gr. Ho.

12. T. *Pyrenaicum*. *Pyrenean Germander*. "Corymbs terminal; leaves orbicular, crenate, hairy, entire, and slightly wedge-shaped at the base; calyx teeth tapering, fringed;" flowers in convex tufts, variegated with pale yellow and purple. June to August. The Pyrenees. 1751. P.

13. T. *Poly*. *Poly Germander*. "Heads roundish, leafy; leaves sessile, oblong, obtuse, convex, bluntly crenate, densely woolly; calyx very woolly, obtuse, pointless;" stems numerous, erect,

downy; leaves numerous, opposite, their edges bent back; flowers numerous, in dense, aggregate heads, on short spikes intermixed with leaves; corolla white, with a yellow palate. There are several varieties with the corolla yellow or purple, some of which have been erected into distinct species. July to September. South of Europe. 1562. S. Gr. Ho.

14. T. Spino'sum. *Thorny Germander.* "Stem and branches spinous, hairy; flowers axillary, opposite; upper segment of the calyx ovate, the rest awl-shaped, spinous;" stem copiously branched; leaves sessile, oblong, notched, green, hairy; flowers numerous, in pairs; corolla white, with red stripes on its upper lip. May, June. Portugal. 1640. A.

The species of this very numerous genus are chiefly but not entirely European. They delight in warm sunny situations, and are all, more or less, bitter and aromatic. The English species are not often admitted into gardens.

IX. A'JUGA, from *a*, privative, and *Juga*, one of the names of Juno, from its supposed quality of producing miscarriage. Nat. ord. *Linn.* Verticillatæ. *Juss.* Labiatæ. 10 Species.

1. A. Orientalis. *Oriental Bugle.* "Leaves ovate, downy beneath; corollas pubescent, inverted;" stem a foot and a half high, brownish purple; flowers purple, in spikes, axillary and terminal; calyx sharp. May, June. The Levant. 1732. P.

2. A. Pyramidalis. *Pyramidal Bugle.* "Spike

a quadrangular pyramid, woolly; root leaves very large," oblong, wedge-shaped, entire; stem leaves ovate, oblong, slightly toothed; stem without runners; floral leaves large, pale purple; corolla purple, with darker lines; palate yellow. May, June. Britain. P.

3. A. Alpi'na. *Alpine Bugle.* " Stem simple; radical leaves the same length as the stem leaves," smoothish, unequally toothed; whorls somewhat remote, many flowered; flowers blue, lower lip three-cleft; stem a foot high, without runners. May to July. England. P.

4. A. Geneven'sis. *Geneva Bugle.* " Radical leaves narrower, smaller than the stem leaves," all of them downy, streaked; calyxes rough; floral leaves three lobed; flowers either white or red: it much resembles the next species. May, June. Switzerland. 1656. P.

5. A. Rep'tans. *Common Bugle.* " Smooth; stem solitary, with creeping runners;" stalk hairy, purple; leaves obovate, elliptic, sitting in cross pairs; flowers in whorls, on a leafy spike; corolla blue with white veins, sometimes it is red or white; calyx hairy, nerved, blueish. May, June. Britain. P.

6. A. Chamæpi'tys. *Ground Pine Bugle.* "Leaves three-cleft, linear, very entire; flowers sitting, axillary, solitary; stem spreading :" plant hairy, clammy, aromatic; flowers yellow, with red dots; calyx very hairy. April to July. England. A.

7. A. I'va. *Musky Bugle.* " Leaves linear,

toothed on the fore part; flowers sessile, axillary, solitary;" stalks about six inches high, closely set with narrow hairy leaves; flowers large, purple or rose-coloured; often abortive; whole plant smelling like musk! August. South of Europe. 1759. A.

The first species is somewhat tender, and requires protection in Winter; the rest are all hardy, and thrive in moist situations. *A. Reptans* is so extremely common in woods that it is seldom thought worthy of cultivation in a garden, though a very pretty plant.

X. PHLO'MIS, from φλόξ, a flame. The Greeks gave the name φλόμες to a species of *Verbascum*, the down of its leaves being used for wicks of lamps. The name was appropriated by Tournefort to this genus on account of the same woolliness of the leaves. Nat. ord. Linn. Verticillatae. Juss. Labiatæ. 27 Species.

1. *P. Frutic'ea.* *Shrubby Phlomis, Jerusalems Sage.* "Leaves oblong, obtuse, soft and densely woolly, crenate; involucre lanceolate; stem shrubby," about five feet high; branched; teeth of the calyx horizontal; leaves varying in size and breadth; flowers yellow, in thick whorls: the plant has a soapy scent when touched. July. Spain. 1596. E. S.

2. *P. Purpurea.* *Purple Phlomis.* "Floral leaves lanceolate, acute, spinous; angles of the calyx acute; teeth erect, spinous; leaves densely woolly beneath," slightly woolly above; stem shrubby, lower and

smaller than the preceding, with the same soapy smell; corolla of a fine light purple. June to August. Portugal. 1661. E. S.

3. P. Italicæ. *Italian Phlomis.* Floral leaves obtuse, without spines; calyx abrupt, unarmed; leaves woolly on both sides; stem somewhat shrubby; lower leaves heart-shaped at the base; corolla purple. June to August. Italy. 1661. E. S.

4. P. Samia. *Samian Phlomis.* "Leaves heart-shaped, crenate, downy beneath; floral leaves in three deep, awl-shaped, spinous segments, the length of the calyx;" stem herbaceous, three feet high, quadrangular, hairy; leaves green above; radical leaves stalked; flowers large, dull purple, in dense leafy whorls; calyx spinous. July. North of Africa. 1714. P.

5. P. Herba Ven'ti. *Rough-leaved Phlomis.* "Leaves ovate, oblong, serrate, rough above, downy beneath; floral leaves awl-shaped, deeply three-cleft, hairy, as well as the stem; calyx hairy, its teeth awl-shaped, pungent, spreading;" corolla purple. July to September. South of Europe. 1596. P.

6. P. Tubero'sa. *Tuberous Phlomis.* "Radical leaves heart-shaped, rough, three ribbed at the base; floral leaves lanceolate, almost entire; floral leaves deeply three-cleft, awl-shaped, bristly; stem herbaceous, smooth," purple; flowers numerous, in dense whorls, light purple; upper lip of the corolla downy, with a jagged edge. June to October. Siberia. 1759. P.

7. P. Lacinia'ta. *Jagged-leaved Phlomis.* "Leaves alternately pinnate; leaflets jagged; calyx abrupt, woolly, with spinous upright teeth;" stem square, woolly; leaves a foot long, stalked, nearly smooth; flowers numerous, large, in woolly whorls; corolla purple, upper lip shaggy. July. The Levant. 1731. P.

All the species of this genus are ornamental, and when properly disposed in gardens, their hoary leaves, intermixed with plants whose leaves are green, form an excellent contrast.

XI. LEONURUS, from λέων, a lion, and οὐρα, a tail. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 7 Species.

1. L. Cardi'aca. *Common Motherwort.* "Upper leaves lanceolate, three lobed, or undivided; corolla longer than the calyx; middle segment of the under lip acute;" stem a yard high, purplish, square, beset with numerous, opposite, stalked, dark green leaves; flowers purple or variegated, numerous, in dense whorls. L. Crispus seems to be only a luxuriant variety of this. July, August. Britain. P.

2. L. Tata'ricus. *Tartarian Motherwort.* "Leaves in three deep divisions, their lobes jagged; upper lip of the corolla erect, vaulted;" calyx woolly; corolla flesh-coloured, smaller and paler than in the next species, which seems to be the chief difference. August to October. Russia. 1753. B.

3. L. Sibiricus. *Siberian Motherwort.* "Leaves in three deep divisions, their lobes jagged, bluntish; upper lip of the corolla straight;" flowers crimson, in dense whorls, with awl-shaped bractæ; calyx silky. June to August. Siberia. 1759. B.

4. L. Marrubias'trum. *Small-flowered Motherwort.* "Leaves ovate, lanceolate, strongly serrate; corolla scarcely longer than the calyx; middle lobe of the under lip rounded, obtuse;" calyx somewhat spiny; leaves stalked, veined; flowers small, flesh-coloured, about twenty in a whorl; anthers without the shining dots, which Linnaeus has given as the essential generic character. June to August. Austria. 1710. A.

XII. BETO'NICA, corrupted from *Vettonica*, which is derived from the Vettones, an ancient people of Spain. Nat. ord. *Linn.* Verticillatæ. Juss. Labiatæ. 8 Species.

1. B. Officinalis. *Wood Betony.* "Spike interrupted; helmet of the corolla entire; middle division of the lower lip notched; calyx smooth;" stem simple; root leaves heart-oblong, stalked; stem leaves nearly sessile, lanceolate, serrate; flowers purple, rarely white. July, August. Britain. P.

2. B. Stric'ta. *Danish Betony.* "Spike oblong; helmet of the corolla entire; middle division of the lower lip waved and crenate; calyxes hairy;" lower leaves heart-shaped; stem leaves spear-shaped,

rounded at the end ; flowers purple ; spikes thick.
June, July. Denmark. 1592. P.

3. B. Inca'na. *Hoary Betony.* " Spike interrupted ; helmet of the corolla two-cleft ; middle division of the lower lip notched ; tube woolly, curved inwards ;" leaves broader than the first species, hoary ; flowers larger, flesh-coloured. July. Italy. 1759. P.

4. B. Orientalis. *Oriental Betony.* " Spike entire ; middle segment of the lower lip of the corolla entire ;" leaves very long, narrow, hairy, neatly crenate at the edge ; flowers in close thick spikes, light purple. July. The Levant. 1737. P.

5. B. Alopecu'tus. *Fox-tail Betony.* " Spike leafy at the base ; helmet of the corolla two-cleft ;" leaves heart-shaped, hairy, serrate ; whorls forming a short spike ; corolla pale yellow ; flowers smelling like Elder ; calyx woolly. July. South of Europe. 1759. P.

6. B. Hirsuta. *Hairy Betony.* " Spike leafy at the base ; helmet of the corolla entire :" it differs from the first sort in the leaves being twice as large, more triangular ; stem stouter ; spike shorter, more ovate and close ; the smell stronger ; corolla purple ; plant hairy. July. Alps of Italy. 1710. P.

7. B. Grandiflora. *Great-flowered Betony.* " Spike leafy, interrupted ; calyxes woolly at the margin, with awl-shaped teeth ; helmet of the corolla inversely heart-shaped ;" root leaves heart-shaped, bluntly

crenate, downy; flowers in two or three equal whorls, not forming a spike; corolla much larger than in any of the other species, purple lilac. July. Siberia. 1800. P.

The Common Betony was in former ages so much in esteem, that it is said Antoninus Musa, physician to Augustus, filled a volume in enumeration of its virtues, stating it as a remedy for no less than forty-seven disorders; hence the Italian proverb, " You have more virtues than Betony :" but so much has the fashion in medicine as in other things altered, that in modern practice it is utterly disregarded. It is said to dye wool of a fine yellow.

XIII. LAMIUM, from *lama*, a slough or ditch, the usual place of its growth. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 13 Species.

1. L. Orva'la. *Balm-leaved Archangel, or Dead Nettle.* " Leaves heart-shaped, unequally and sharply serrate; throat of the corolla inflated; upper lip sharply toothed; calyx coloured;" stem round, smooth; leaves three or four inches long, wrinkled, dark; flowers large, crimson. May to July. Italy. 1596. P.

2. L. Læviga'tum. *Smooth Archangel.* " Leaves heart-shaped, pointed, strongly serrate, nearly smooth, as well as the stem; upper lip of the corolla abrupt, entire; calyx nearly smooth, with taper teeth much longer than its tube," and almost equal to the corolla; stem square, purplish, leafy; corolla downy,

bright purple without, pale and smooth within; tube spotted. March to October. Italy. 1711. P.

3. L. *Rugo'sum*. *Wrinkled Archangel*. "Leaves heart-shaped, acute, wrinkled, hairy, as well as the stem; whorls many flowered, a single bristle-shaped tooth at the throat;" upper lip of the corolla abrupt, notched; leaves on longish stalks; flowers purplish red: plant about a foot high. July. Italy. 1766. P.

4. L. *Garga'nicum*. *Woolly Archangel*. "Leaves heart-shaped, bluntly serrate, wrinkled, downy, as well as the stem; corolla inflated, with a straight tube much longer than the calyx; throat with two teeth on each side;" flowers large, numerous; tube pale, streaked with red; lip light purple. July, August. Italy. 1729. P.

5. L. *Macula'tum*. *Spotted Archangel*. "Leaves heart-shaped, strongly serrate, acute, hairy; tube of the corolla nerved, longer than the calyx; upper lip entire; lateral teeth solitary, slender;" radical leaves with a central stripe; flowers purplish red, downy. July. Italy. 1683. P.

6. L. *Mol'le*. *Pellitory-leaved Archangel*. "Leaves pointed, stalked, nearly entire; lower leaves heart-shaped, the upper ovate;" calyx teeth bristle-shaped; upper lip of the corolla crenate, hairy; lateral teeth solitary, awl-shaped; flowers white. May. Native country unknown. 1683. P..

The English species of this genus are considered rather as weeds than flowers: how it obtained the magnificent

name of Archangel does not appear. L. Orvala is a showy and handsome plant.

XIV. *GALBOP'SIS*, from γαληνή, a cat, and οψις, a countenance, alluding to the mouth of the flower. Nat. ord. *Linn.* Verticillatæ. *Juss.* Labiatæ. 4 Species.

1. *G. Versicolor*. *Large-flowered Hemp Nettle*, or *Bee Nettle*. " Stem hairy; internodes thicker above; corolla three times as long as the calyx; helmet swelling;" flowers handsome, large, yellow; palate violet, with tawny streaks. It varies with purple and white flowers. July. Britain. A.

All the species of this genus are natives of Britain, but like most of those of the preceding genus, are commonly esteemed as mere weeds.

XV. *STA'CHYS*, from στραχύς, a spike, the flowers commonly growing in that form. Nat. ord. *Linn.* Verticillatæ. *Juss.* Labiatæ. 26 Species.

1. *S. Circinata*. *Blunt-leaved Stachys*, or *Wound Wort*. " Whorls six-flowered, spiked; floral leaves heart-shaped; leaves heart-shaped, stalked, obtusely toothed;" stems several, hairy; leaves hairy, remote; corolla purple; upper lip downy. May to July. Barbary. 1777. P.

2. *S. Alpina*. *Alpine Stachys*. " Whorls many flowered; serratures of the leaves membranous at the tip; corollas with a flat lip;" leaves greenish yellow,

lower cordate, upper ovate; corolla dull purple; plant of a dusky hue, smelling like Baum. June to August. Germany. 1597. P.

3. S. Germa'nica. *Downy Stachys.* "Whorls many flowered; leaves crenate; stem woolly, erect;" leaves stalked, ovate, acute, covered with a soft white down; flowers numerous; corolla purple within, streaked about the mouth with white, the outside silky and silvery. July. England. P.

4. S. Lana'ta. *Woolly Stachys.* "Whorls many flowered; leaves woolly; stems procumbent and rooting at the base," somewhat woody at bottom; every part of the plant covered with a thick white wool; leaves ovate, oblong, stalked; corolla resembling the preceding, leaves blunter, the whole far more densely woolly. June to September. Siberia. 1762. P.

5. S. Cre'tica. *Cretan Stachys.* "Whorls thirty flowered; calyxes prickly; stem rough haired;" plant resembling S. Germanica, but this is lurid and rough haired, without any wool; floral leaves lanceolate, serrate, not reflexed as in that; corolla purple. June to August. Candia. 1640. P.

6. S. Orienta'lis. *Levant Stachys.* "Leaves woolly, egg lance-shaped; floral leaves shorter than the whorl;" stem hairy; leaves wrinkled, crenate, soft, with close hairs; whorls remote, many flowered; calyxes hairy, ash-coloured; corolla yellow; upper

lip very hairy on the outside. July. The Levant.
1768. P.

7. S. Mari'tima. *Sea Stachys.* "Leaves cordate, obtuse, crenate, woolly; floral leaves oblong, quite entire;" stem a little shrubby, downy; calyxes woolly, sharp; corolla yellow, sometimes with purple dots; upper lip paler. July. South of Europe.
1714. P.

8. S. Hir'ta. *Procumbent Stachys.* "Whorls six flowered; stems prostrate; upper lip of the corolla widely cleft and reflexed;" stems four-cornered, hollow, brittle; leaves heart-shaped, hairy on both sides; calyx awned; corolla with purple spots. June to August. Spain. 1725. P.

9. S. Rec'ta. *Upright Stachys.* "Whorls somewhat spiked; leaves elliptic, heart-shaped, crenate, rough; stems ascending;" calyx somewhat spiny; flowers in whorls of about ten each, yellow. June to August. South of Europe. 1683. P.

10. S. An'nua. *White Annual Stachys.* "Whorls of six flowers; leaves egg lance-shaped, serrate, stalked, smooth, three ribbed; stem branched, erect," square; calyx with spinous teeth; corolla white, with a yellowish lip. July. Germany. 1713. A.

None of these plants are in much request, except the S. Lanata, which is common in most gardens: our native species being usually considered as mere weeds, are consequently not admitted.

XVI. **NE'PETA**, from *nepa*, a scorpion, it being reputed efficacious against the bite of that insect. Nat. ord. *Linn.* *Verticillatæ.* *Juss.* *Labiatae.* 27 Species.

1. **N. Cata'ria.** *Nep or Cat Mint.* "Flowers spiked; whorls slightly stalked;" leaves stalked, heart-shaped, with tooth-like serratures; stem erect, square; leaves opposite, wrinkled; calyx veined, with bristly teeth; corolla white, with a reddish dotted lip. July to September. Britain. P.

2. **N. Angustifo'lia.** *Narrow-leaved Cat Mint.* "Flowers in spiked corymbs, on stalks; leaves lanceolate, downy, wrinkled, obtusely serrate;" whole plant downy; floral leaves linear; corolla inclining to red. July. Hungary. 1798. P.

3. **N. Panno'nica.** *Hungarian Cat Mint.* "Flowers in panicles; leaves stalked, heart-shaped, slightly notched;" stems numerous, branched, channeled, smoothish; flowers reddish, elegantly dotted. August to October. Hungary. 1683. P.

4. **N. Viola'cea.** *Violet-coloured Cat Mint.* "Cymes many flowered, stalked, beset with fine hairs; leaves slightly stalked, almost naked;" stems purple, with a few slender branches: flowers in roundish whorls, blue, sometimes white. July to September. Spain. 1723. P.

5. **N. Inca'na.** *Hoary Cat Mint.* "Cymes stalked, many flowered; leaves stalked, oblong, somewhat heart-shaped, downy, notched;" stem herbaceous,

decumbent; panicles of flowers in the upper axils, opposite, three cleft; flowers reddish. August. The Levant. 1723. P.

6. N. Nepetel'la. *Small Cat Mint.* "Leaves lanceolate, heart-shaped, oblong, deeply serrate, woolly;" clusters compound, each branch about five, flowered; flowers red. This much resembles the first species, but is only about one third its size. July to September. South of Europe. 1758. P.

7. N. Nu'da. *Naked or Spanish Cat Mint.* "Leaves heart-shaped, nearly sessile, serrate; clusters whorled, naked;" stems smooth, straight, the older ones purple; leaves blunt, veined, naked, rugged; flowers distinct; corolla reddish, or white dotted with purple. June to August. South of Europe. 1710. P.

8. N. Melissæfo'lia. *Balm-leaved Cat Mint.* "Leaves on stalks, heart-shaped, serrate; whorls stalked, corymbose; calyx long, scored;" stem square, downy; corolla blue, its under lip dotted with red. July, August. Candia. 1752. P.

9. N. Ita'lica. *Italian Cat Mint.* "Flowers sessile, in whorled spikes; floral leaves lanceolate, the length of the calyx; leaves stalked;" whorls of flowers distant; leaves short, heart-shaped, oval, crenate; corolla white; the whole herb hoary, and strong scented. June to August. 1640. P.

10. N. Tubero'sa. *Tuberous rooted Cat Mint.* "Spikes terminal, sessile; floral leaves ovate, co-

loured; upper leaves sessile;" stem erect, furrowed; flowers sessile, purple; floral leaves veined, entire, downy. June to August. Spain. 1683. P.

11. N. Lana'ta. *Woolly Cat Mint.* "Spikes terminal; floral leaves ovate, nerved; rugged, dry, membranous; leaves oblong, heart-shaped, woolly; side lobes of the corolla spreading;" stems clammy, hairy; leaves bluntish, notched, strongly scented; flowers in a spike, about seven on a stalk, pale purple. June. South of Europe. 1774. P.

12. N. Multi'fida. *Perennial Siberian Cat Mint.* "Flowers in spikes; leaves wing cleft, entire; outward divisions spreading;" stem erect, not branched; leaves stalked, upper sessile, three or five lobed; flowers very small, white or purplish. July, August. Siberia. 1790. P.

13. N. Botryo'ides. *Annual Siberian Cat Mint.* "Flowers in spikes; leaves twice pinnate; segments linear, equal;" stem square, erect; spike terminal, hexagonal, sessile; flowers small, white. July. Siberia. 1779. A.

14. N. Virgi'nica. *American Cat Mint.* "Heads terminating; stamens longer than the flower; leaves lanceolate," nearly sessile, dotted, veiny, thick edged, scarcely hoary; flowers white, small, in numerous dense, terminal, hoary, compound heads. August. North America. 1752. P.

All these plants are more or less, aromatic, and are sup-

posed to partake of the virtues of herbs of the same class. They are not frequently introduced into gardens, and yet perhaps some other species, besides the above described, may occasionally be found there. *N. Cataria* is remarkable for its being greatly attractive to cats, especially when withered and bruised, which circumstance explains these ancient and notable couplets :—“ If you set it, The cats will eat it ; If you sow it, The cats wo’nt know it.”

XVII. SATURE'A, from *saturo*, to fill or satisfy ; it being in use to season food. Nat. ord. *Linn.* Ver-ticillatae. *Juss.* Labiateæ. 18 Species.

1. *S. Montana*. *Winter Savory*. “ Flower stalks axillary, in cymes, slightly turned one way ; calyx, teeth tapering, pointed ; leaves linear, lanceolate, entire, with sharp points ; stem shrubby,” scarcely a foot high ; leaves evergreen, dilated upwards ; flowers white, with a lilac tinge and violet spots. This species is much in use for seasoning in culinary purposes. June, July. Italy. 1562.

2. *S. Rupes'tris*. *Rock Savory*. “ Flower-stalks axillary, in cymes, turned one way ; calyx teeth short and blunt ; leaves egg spear-shaped, toothed, notched,” bluntnish, dotted beneath ; flowers copious, whitish, dotted with crimson. July. Carniola. 1798. P.

3. *S. Horten'sis*. *Summer Savory*. “ Flower-stalks axillary, somewhat in cymes ; leaves lanceolate, entire ; stem herbaceous, with opposite crossing branches,” rather bushy ; leaves smooth, flowers

whitish. This is not so much in use as the Winter Savory; it is however popular in Germany. June to August. Italy. 1562. A.

4. S. Capita'ta. *Fringed Savory.* "Flowers spiked; leaves keeled, dotted, fringed;" stem shrubby, bushy; leaves small, crowded; flowers light purple, in copious, dense, terminal spikes, with reddish floral leaves, tiled. June to October. The Levant. 1593. S.

XVIII. BALLO'TA, from *βαλλω*, to cast away; it having a disagreeable smell. Nat. ord. *Linn.* Verticillatæ. *Juss.* Labiatæ. 4 Species.

1. B. Lana'ta. *Woolly Black Horehound.* "Leaves palmate, toothed; stem woolly;" whorls of flowers extremely hairy; leaves like those of gooseberry, with blunt three toothed lobes, smooth above, hairy beneath; corolla pale yellow. June to August. Siberia. 1752. P.

An English Species, B. Nigra, is a foetid weed, and never admitted into gardens; it is said, however, to have been prescribed in hysterical disorders.

XIX. MARRU'BIUM, from a town of the same name in Italy. Nat. ord. *Linn.* Verticillatæ. *Juss.* Labiatæ. 14 Species.

* *Calyx with five teeth.*

1. M. Aly'ssum. *Plaited-leaved White Horehound, or Galen's Mad Wort.* "Leaves wedge-shaped, five toothed, plaited; stem branched, rigid;

whorls without an involucre ;" leaves opposite, hoary ; flowers purple, in large loose whorls ; calyx segments prickly. July, August. Spain. 1597. P.

2. M. Peregrinum. *Sicilian White Horehound.*
" Leaves ovate, lanceolate, serrate ; calyx teeth bristle-shaped ;" stems near two feet high, quadrangular, woolly below ; leaves opposite, stalked, acute, veined, wrinkled, toothed ; flowers white, rather woolly, scent rather pleasant. June to September. Sicily. 1640. P.

Var. 1. M. Creticum, with narrow leaves.

3. M. Candidissimum. *Woolly White Horehound.*
" Leaves ovate, obtuse, toothed, wrinkled, veined ; calyx teeth awl-shaped ; stem somewhat branched at the base ;" stems procumbent below, obtusely square, woolly ; leaves thick, pale green, hoary ; flowers terminal, white, in close whorls. June to September. The Levant. 1732. P.

4. M. Supinum. *Procumbent White Horehound.*
" Leaves roundish, rather heart-shaped, notched ; calyx teeth bristly, straight, woolly ;" stems a span high, covered with a soft hoary down ; leaves small, roundish, very soft and hoary ; flowers white, in small downy whorls. August, October. Spain. 1640. P.

**. *Calyx with ten teeth.*

- 5. M. Vulgare. *Common White Horehound.*
" Leaves somewhat round, toothed, wrinkled, hairy ; calyx teeth bristly hooked ;" stem thickly woolly ;

leaves opposite, stalked; flowers white, in numerous sessile, hairy whorls; herb bitter, aromatic. June to September. Britain. P.

6. M. Crispum. *Curled-leaved White Horehound.* "Leaves heart-shaped, roundish, notched, or rather toothed; calyx teeth awnless;" stem rather shrubby, upright, rough with hairs; leaves stalked, wrinkled, downy; corolla purplish, not hairy. August, South of Europe. 1714. P.

7. M. Pseundo Dictamnus. *Shrubby White Horehound,* "Border of the calyx flat, hairy; leaves heart-shaped, concave; stem shrubby," divided into many branches; leaves small, growing close to the stalks; flowers whorled, of a white colour. It has its name from its general resemblance to the *Origanum Dictamnus*. June to August. Candia. 1596. S.

These plants are seldom cultivated, unless in botanic gardens, except the last, and that requires some protection in winter. The expressed juice of the Common White Horehound has been long used in coughs and pulmonary disorders, either as tea, or formed with sugar into a sort of candy.

XX. **MOLUCELLA**, diminutive of the Molucca Islands, of which one of these plants is a native. Nat. ord. *Linn. Verticillatae. Juss. Labiate.* 6 Species.

1. M. Spino'sa. *Prickly Molucca Balm.* "Upper lip of the calyx lance-shaped, with a very long point, lower rounded: with seven spines; leaves stalked, ovate, palmate, cut;" stem about four feet high,

smooth, purplish; flowers ten or twelve in a whorl; white, upper lip hairy; palate streaked with purple. August. The Levant. 1596. A.

2. M. Læ'vis. *Smooth Molucca Balm.* "Calyx bell-shaped, slightly five toothed, teeth equal, minutely spinous; leaves on longish stalks, roundish or ovate, toothed," smooth, light green; flowers about six, in whorls, crowded into a long spike; corolla white, with a lilac tinge. August. Syria. 1570. A.

3. M. Tubero'sa. *Tuberous rooted Molucca Balm.* "Calyx funnel-shaped, five toothed, teeth equal, pointed; stem leaves nearly sessile, oblong, wedge-shaped, toothed;" radical leaves on long stalks, ovate, notched; stem branched, hairy at the joints; flowers about three or four in a whorl, forming a loose spike; corolla bright yellow. July. Tartary. 1769. P.

xxi. SCUTELLA'RIA, from *scutella*, a small dish; in allusion to the concave appendage which crowns the calyx. Nat. ord. *Linn.* *Verticillatae.* *Juss.* *Labiatae.* 17 Species.

1. S. Orientalis. *Yellow flowered Skull Cap.* "Leaves with deep parallel teeth, downy beneath; spike cylindrical, slightly quadrangular;" stems taking root at the lower joints; leaves stalked, almost pectinate or comb-like; spikes short: flowers bright yellow, handsome; floral leaves brownish. July, August. The Levant. 1729. P..

2. S. *Grandiflora*. *Large flowered Skull Cap.* "Leaves heart-shaped, deeply crenate, downy on both sides, shorter than their stalks; spikes short, quadrangular; corolla hairy, four times larger than the floral leaves;" it is of a lilac colour, with a yellow palate: possibly it may be only a variety of the last. August. Siberia. 1804. P.

3. S. *Al'bida*. *Pale hairy Skull Cap.* "Leaves heart-shaped, serrate, downy, as well as the stem; spikes elongated, pointing one way; floral leaves two ranked, ovate;" corolla downy, lower lip entire, cream-coloured; flowers crowded. July. The Levant. 1771. P.

4. S. *Alpina*. *Alpine Skull Cap.* "Leaves heart-shaped, serrate, or jagged; spikes tiled, roundish, or slightly four-sided; floral leaves twice as short as the flowers;" stem very much branched, a span high; leaves on short stalks, obtuse, downy; flowers pale violet, with a white upper lip. June to October. Switzerland. 1752. P.

5. S. *Lupulina*. *Tartarian Skull Cap.* "Leaves heart-shaped, serrate or jagged, smooth; spikes tiled, roundish, or slightly four-sided; floral leaves the same length as the flowers;" stems shrubby and trailing; flowers white or blue, sometimes yellowish white, very large: the plant in habit much resembling the last. June to September. Siberia. 1739. P.

6. S. *Lateriflora*. *Virginian Skull Cap.* "Leaves smooth, but rough at the keel; clusters lateral,

leafy; floral leaves bristly;" stem branched, leafy, roughish; leaves stalked, ovate, serrate; flowers small, blue. July to September. North America. 1752. P.

7. *S. Galericulata*. *Common Skull Cap*. "Leaves heart lance-shaped, crenate, rugged;" flowers axillary;" stem erect, from one to two feet high, leafy, branching sharply quadrangular; leaves on short stalks, wrinkled, veined, downy, paler beneath; flowers axillary, solitary, nearly sessile, in pairs, inclined the same way, drooping, blue or purplish white. *S. Hastifolia*, *Halbert-leaved Skull Cap*, with larger flowers, and *S. Minor*, *Lesser Skull Cap*, with smaller flowers, are scarcely more than varieties of this. June to September. Britain. P.

8. *S. Serrata*. *Saw-leaved Skull Cap*. "Leaves ovate, pointed, serrate, stalked, nearly smooth; clusters compound, lax, slightly downy;" floral leaves lanceolate; stem three feet high; leaves tapering at the base; flowers numerous, handsome, deep blue. June to September. North America. 1800. P.

9. *S. Integrifolia*. *Entire-leaved Skull Cap*. "Leaves sessile, ovate, narrowed at the base; lower indistinctly serrate, upper quite entire;" stems two feet high, sending out many side branches, racemes, or spikes, long, lax, at the end of the branches; purple, blue. June to September. North America. 1731. P.

10. *S. Peregrina*. *Florentine Skull Cap*. "Leaves

heart-shaped, serrate, minutely downy, as well as the stem ; spikes elongated ; flowers leaning to one side ; floral leaves two rowed, ovate, stalked, about the same length as the flowers ;" stem purplish, downy, not hairy ; corolla of a dark blood red, with a yellow palate. June to October. Italy. 1682. P.

II. S. Altissima. Tell Skall Cap. "Leaves heart-shaped, serrate, acute, nearly smooth ; spikes almost naked ; floral leaves very small ;" calyx and flower-stalks rough, with glandular hairs ; flowers numerous, purple, downy, with longer tubes than the other sorts ; stems three or four feet high. July, August. The Levant. 1731. P.

This genus is distinguished from all others by its seeds being contained within the closed calyx, which, with its crest and lid, somewhat resembles a helmet. The different species are, however, rather confused, and difficult to make out ; all of them are curious, and those with larger flowers sufficiently ornamental in borders.

XXII. THYMUS, from θυμός, to fumigate ; it being anciently used in sacrifices, on account of its fragrance. Nat. ord. Linn. Verticillatae. Juss. Labiate. 22 Species.

I. T. Serpyllum. Mother of Thyme. "Flowers in heads ; stems decumbent, creeping ; leaves flat, ovate, obtuse, fringed at the base," dotted ; stems wiry, slender, always wavy, and not straight ; branches leafy, downy ; flowers purple, the palate variegated

with white or crimson. No plant more frequently varies : sometimes with flowers much larger, or white or rose colour, with variegated leaves ; or the stem and leaves woolly. The variety called Lemon Thyme, with the grateful scent of lemon peel, is much esteemed. June to August. Britain. P.

2. T. Vulga'ris. *Common Garden Thyme.* " Stem shrubby, much branched, erect ; leaves ovate, turned back at the edge : whorls crowded into leafy spikes ;" leaves downy, of a greyish hue, with little axillary tufts of smaller ones ; flowers small, light purple. May to August. Italy. 1548. S.

3. T. Zy'gis. *White Spanish Thyme.* " Stem shrubby, ascending ; leaves linear, lanceolate, obtuse, turned back at the edge, tapering and fringed at the base ;" whorls crowded into leafy spikes ; leaves crowded, dotted, ribbed beneath ; corolla white, with red dots on the palate. August. Spain. 1771. S.

4. T. A'cinos. *Basil Thyme.* " Flowers stalked, about six in a whorl ; stem herbaceous, ascending, branched ; leaves acute, serrate ; calyx gibbous at the base ;" leaves in distant pairs ; flowers light violet ; palate white, with dark purple spots ; less aromatic. June to August. Britain. A.

5. T. Patavi'nus. *Marjoram-leaved Thyme.* " Flowers whorled ; leaves ovate, with copious shallow serratures, slightly hairy ; stem shrubby," pubescent, branched ; calyx ten streaked, downy ; peduncles one flowered ; corolla pale red ; a little larger than the

last species. June to August. South of Europe.

1776. B.

6. T. Mastichi'na. *Mastick Thyme.* "Whorls stalked, many flowered, crowded into round heads; leaves ovate, obtuse, entire; calyx teeth awl-shaped, taper pointed, fringed;" stem shrubby, bushy; branches leafy, downy; leaves numerous, stalked; flowers white, small, remarkable for the long slender teeth of the calyx. July to September. Greece and Spain. 1596. S. Gr. Ho.

7. T. Virgi'nicus. *Virginian or Savory Thyme.* "Heads of flowers terminating; stem erect; leaves lanceolate;" stem much branched, downy at the angles; leaves stiff, pointed, having a strong scent of Penny Royal; flowers white, collected into globular heads. August. North America. 1739. P.

All the species of *Thymus* possess an aromatic quality, which resides chiefly in the leaves. Common Garden Thyme is in universal use for various culinary purposes. The Spaniards infuse it into the pickles with which they preserve their olives. It is a common notion that the flesh of sheep which feed upon the Wild Thyme is superior in flavour to other mutton; but the truth is, that sheep never eat it unless by accident. It loves a dry soil, which produces a short sweet pasturage, best adapted to the sustenance and health of these animals.

XXIII. O'CIMUM, from οχύειν, quickly; alluding to its rapid growth. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 27 Species.

1. O. Basileicum. *Common Sweet Basil.* "Leaves ovate, smooth; calyx fringed," hairy; stem somewhat shrubby, three feet high, erect, round, branched; leaves serrate, pubescent, stalked, brownish red, occasionally curled, cut, or blistered; if not too much bruised exhaling a pleasant smell like cloves; flowers white, sometimes violet, small, in long upright spiky bunches, terminal. This plant is much used in French cookery. August. India. 1548. A.

2. O. Minimum. *Bush Basil.* "Leaves ovate, quite entire;" stem about six inches high, forming a roundish head; leaves small, smooth, on short foot-stalks; flowers in whorls towards the top of the branches; smaller than the preceding; it varies with leaves dark purple. July, August. East Indies. 1573. A.

xxiv. PRUNELLA, or BRUNELLA, from the German *die Breune*, a sore throat; which disease this plant was said to cure. Nat. ord. Linn. Verticillatae. Juss. Labiatæ. 3 Species.

1. P. Vulgaris. *Common Self-heal.* "Leaves ovate, oblong, on foot-stalks;" stem branched, with erect, white hairs; spikes terminal, solitary, cylindrical, whorled, blunt, dense, with a pair of leaves at the base; flowers violet, sometimes red or white. July, August. Britain. P.

2. P. Grandiflora. *Great flowered Self-heal.* "Lower leaves stalked, oblong, ovate, toothed at the

base; upper lip of the calyx three cleft; stem ascending," about six inches high, slightly angular, hairy; spike looser than in the preceding; flowers large, handsome, of a rich blue: there is a variety with the upper leaves jagged. July to September. South of France. 1596. P.

3. P. *Hyssopifolia*. *Hyssop-leaved Self-heal.*
Leaves sessile, lanceolate, entire, rough; stem erect," firm, little branched; leaves narrow, oblong, entire, hairy, on short stalks; flowers large, blue, sometimes white; keel of the upper lip of the corolla hairy. July to October. France. 1731. P.

XXV. CLEONIA, the *κλείνεια* of Theophrastus, and that probably from Cleonæ, a city of Greece. Nat. ord. Linn. Verticillatae. Juss. Labiateæ. 1 Species.

1. *C. Lusitanica*. *Sweet-scented Cleonia*. Stem six or eight inches high, erect, woolly; leaves obtuse at the end, narrowed at the base, toothed, upper ones wing cleft; floral leaves jagged; flowers blue, large, in a terminal hairy spike; a plant differing little from *Prunella*, except in its four cleft stigma. July. Portugal. 1710. A.

XXVI. TRICHOSTEMA, from θρίξ-τρίχος, hair, and στέμμα, a stamen; alluding to the long filaments. Nat. ord. Linn. Verticillatae. Juss. Labiateæ. 2 Species.

1. *T. Dichotoma*. *Marjoram-leaved Annual Trichostema*. "Stamens very long, prominent; leaves

-rhomboid, lanceolate, flowering; branches twice-forked;" flowers large, fine blue; leaves opposite, rough, the lower accompanied by axillary tufts of small leaves; calyx reflexed after flowering. June, July. North America. 1759. A.

XXVII. DRACOCEPHALUM, from δράκων, a dragon, and κεφαλή, the head; because of the large swelling form of its ringent corolla. Nat. ord. Linn. Verticillatae. Juss. Labiatæ. 18 Species.

* Flowers in Spikes.

1. D. Virginia'num. *Virginian Dragon's Head.* "Flowers crowded; leaves linear, lanceolate, serrate," sessile, in pairs at each joint, sometimes in threes; stems upright, about three feet high; flowers purple. July to September. North America. 1683. P.

2. D. Canarien'se. *Canary Dragon's Head, or Balm of Gilead.* "Leaves ternate, lateral leaflets somewhat two lobed;" stems several; leaves at each joint, stalked; leaflets oblong, pointed, serrate; flowers in short thick spikes, pale blue; the leaves when slightly rubbed imparting a delightful odour. July to September. The Canary Islands. 1697. P. Gr. Ho.

3. D. Peregrinum. *Prickly-leaved Dragon's Head.* "Flowers somewhat spiked; stem leaves ovate, oblong, gashed; floral leaves linear, lanceolate, toothed, spiny;" stems several, the joints an inch asunder; leaves like those of Rosemary; small

branches axillary; corolla blue-purple. August. Siberia. 1759. P.

4. D. Austri'acum. *Austrian Dragon's Head.* "Leaves sessile, linear, pointed; stem leaves three to five, parted; cluster simple; floral leaves three-parted;" stem hairy, sending out side branches; flowers axillary on the upper part of the stem, in twos or threes, blue-purple, paler without, very handsome. D. Ruyschiana, D. Grandiflorum, and D. Altaiense, are scarcely more than varieties of this. July. Austria. 1597. P.

* *Flowers in whorls.*

5. D. Sibi'ricum. *Siberian Dragon's Head.* "Whorls stalked, two cleft, pointing one way; leaves heart lance-shaped, pointed, serrate, smooth;" stems branched, spreading; calyx purple; corolla pale blue; plant foetid, smelling like rancid oil. June to August. Siberia. 1760. P.

6. D. Molda'veca. *Moldavian Balm.* "Floral leaves lanceolate, fringed; leaves lanceolate, deeply toothed, dotted beneath; lower serratures fringed;" flowers in whorls round each joint of the stalk, blue; plant of an agreeable balsamic odour. August. Moldavia. 1596. A.

7. D. Canes'cens. *Hoary Dragon's Head.* "Floral leaves oblong; teeth fringed; calyxes scored, downy, longer than the tube of the corolla; leaves woolly;" stems hoary; whorls of flowers sitting, of a fine blue, large. August. The Levant. 1711. A.

< 8. D. Pelet'atum. *Willow-leaved Dragon's Head.*

"Floral leaves roundish; calyxes scored, smooth, with oblong veined segments, shorter than the tube of the corolla;" stem about a foot high, sending out two small branches from the lower part; leaves lanceolate, crenate; flowers small, purplish. August. The Levant. 1711. A.

O. D. Nutans. *Nodding Dragon's Head.* "Floral leaves oblong, ovate, very entire; corollas nodding, twice as long as the calyx;" stalks many, weak; lower leaves stalked, upper sitting; flowers in whorls, somewhat drooping, deep blue. July, August. Siberia. 1731. P.

10. O. Thymifl̄um. *Small-flowered Dragon's Head.* "Floral leaves oblong, very entire; corollas scarcely larger than the calyx;" lower leaves elliptic, on long stalks; upper leaves nearly sessile; flowers in whorls at each joint, pale purple, small, making little appearance. June to September. Siberia. 1752. A.

XXVIII. ORIGANUM; from ὄρος, a mountain, and γανός, joy, in allusion to its fragrance and place of growth. Nat. ord. Linn. Verticillatæ. Juss. Labiatæ. 16 Species.

1. O. Dictamnus. *Dittany of Crete.* "Lower leaves woolly; spikes drooping;" stem shrubby; leaves ovate, clothed with loose wool, aromatic; involucrum lax, purplish, dotted; flowers purple, in loose leafy heads. June to August. Isle of Candia. 1551. S. Gr. Ho.

2. O. Créticus. *Cretan Marjoram.* "Leaves

ovate, nearly entire, with roughish veins; spikes clustered, oblong, erect; floral leaves acute, membranous, twice as long as the calyx;" flowers small, white. July, August. South of Europe. 1596. P.

3. *O. Heracleoticum*. *Winter Sweet Marjoram*. "Leaves ovate; spikes large, stalked, clustered; floral leaves the length of the calyx;" stems branching, hairy; flowers white, small, peeping out of their scaly covers. June to November. South of Europe. 1640. P.

4. *O. Vulgare*. *Common Marjoram*. "Leaves ovate; spikes roundish, panicled, clustered, smooth; floral leaves ovate, longer than the calyx," dark purple; stem hairy, purple; leaves entire, dark green, dotted; spikes numerous, dense, short; flowers rose-colour. June to November. Britain. P.

5. *O. Onites*, *Pot Marjoram*. "Leaves heart-shaped, downy; spikes oblong, obtuse, hairy, clustered;" stems with long spreading hairs; leaves small, rather woolly; spikes by threes on each peduncle, the middle one sessile; flowers small, white. July to November. Sicily. 1759. P.

6. *O. Majorana*. *Sweet or Knotted Marjoram*. "Leaves stalked, obovate, downy, obtuse; spikes roundish, compact, downy, clustered;" stems numerous, woody, branched; flowers small, white, appearing successively between the floral leaves. June to July. Portugal. 1573. B. Gr. Ho.

The first species is an ancient inhabitant of our green-

houses, and is the plant with which Venus cured the wound of *Aeneas*, in Virgil; the last species is that upon which the same goddess placed Ascanius when asleep. Nos. 3, 4, and 5, have been long in use for culinary purposes in soups and seasoning, and have all been indiscriminately called Pot Marjoram on that account.

XXIX. *CLINOPO'DIUM*, from *κλίνω*, a bed, and *πόδες*, a foot, the whorls growing above each other like the ancient turned feet of couches. Nat. ord. *Linn.* *Verticillatæ*. *Juss.* *Labiatae*. 3 Species.

1. *C. Vulga're*. *Common Wild Basil*. "Whorls hairy; floral leaves bristle-shaped; leaf stalks branched; leaves slightly serrate," ovate, with veins; flowers purplish, rose-coloured; calyx ribbed, hairy; whorls many flowered: plant aromatic. There are two dwarf varieties, one from Egypt, and one from North America. June to August. Britain. P.

2. *C. Inca'num*. *Hoary Clinopodium*. "Leaves woolly beneath; whorls flattened; floral leaves lanceolate; stems about two feet high, with a few side branches; leaves oblong, oval, with a strong odour; upper surface pale green; whorls of flowers generally three; flowers pale purple: the plant in some parts of America is called Snake Weed. July to October. North America. 1732. P.

XXX. *MELIT'TIS*, from *μέλιττα*, a bee, in the attic dialect. Nat. ord. *Linn.* *Verticillatæ*. *Juss.* *Labiatae*. 2 Species.

1. *M. Melissophyllum*. *Reddish Bastard Balm.*
 " Calyx three lobed, nearly smooth," purplish; stems
 herbaceous, erect, simple, leafy; leaves opposite,
 stalked, ovate, serrate, hairy; flowers axillary, turned
 one way, about three on each side; corolla large,
 handsome, flesh-coloured without, internally whitish;
 the lip with a crimson spot. There is a variety with
 inversely heart-shaped leaves. May, June, En-
 gland. P.

2. *M. Grandiflora*. *Purple and White Bastard Balm.* " Calyx in four equal lobes, nearly smooth;" corolla larger than in the last species, white, with a pale tinge of yellow; middle segment of the lower lip purple, with a white margin: the general habit and form of the two plants are much the same. May.
 England. P.

XXXI. MELIS'SA, from μέλισσα, a bee, because of its abundant honey. Nat. ord. Linn. Verticillatae. Juss. Labiatæ. 7 Species.

1. *M. Officinalis*. *Common Garden Balm or Baus.*
 " Whorls halved; floral leaves oblong, stalked; leaves
 ovate, acute, serrate," opposite, stalked, strongly
 veined; stems many, leafy, somewhat branched,
 acutely quadrangular, hairy; flowers axillary, stalk-
 ed; calyx hairy; corolla twice as long, white or pale
 purplish. Roman Balm is a variety with smaller
 leaves, sessile whorls, of a disagreeable odour. June
 to October. South of Europe. 1573. P.

3. M. Grandiflora. *Great-flowered Balm.* "Flower-stalks axillary, forked, longer than the foot-stalks; floral leaves lanceolate, sessile; leaves ovate, serrate," hairy; stem about a foot high, weak and spreading; flowers from three to seven on each axillary stalk; corolla large, light crimson, with a white streak and spots on the lower lip: a plant of powerful scent, but without the lemon flavour of the last. June to September. Italy. 1598. P.

3. M. Calamintha. *Common Calamint.* "Whorls stalked, many flowered, forked; leaves hairy, with shallow serratures; beard of the calyx concealed; stem erect," hairy, with many opposite branches; leaves broad, ovate; stalked; flowers copious, pale lilac; plant of a peculiarly grateful fragrance. July, August. England. P.

4. M. Ne'peta. *Lesser Calamint.* "Whorls stalked, many flowered, forked, longer than the leaves; leaves serrate; beard of the calyx prominent; stem erect," somewhat hairy; leaves smaller than the last, on longer stalks; scent resembling Penny-royal; flowers lilac. July to October. England.. P.

The Common Balm was in high estimation with the Arabian physicians, and from them continued in repute as a remedy in nervous and hypochondriacal affections; it is now however used in no other way than as a diluent in fevers, its grateful Lemon scent and flavour affording a pleasant drink.

XXXII. PHRY'MA, a name invented by Linnæus;

but its meaning no one has ventured to guess. Nat. ord. *Linn.* Personatæ. *Juss.* Labiatæ. 2 Species.

1. P. Leptosta'chya. *Slender-spiked Phryne.*
"Leaves ovate, serrate; calyx of one leaf, five-cleft;" stem a foot high; leaves opposite, rugged; flowers in long, slender, terminal spikes, white, small; floral leaves in threes, awl-shaped; calyx closed, bent down: a plant of no great attraction. August, September. North America. 1802. P.

Order Angiospermia.

XXXIII. ACAN'THUS, from ἀκανθα, a thorn. Nat. ord. *Linn.* Personatæ. *Juss.* Acanthi. 14 Species.

1. A. Mol'lis. *Smooth Acanthus, or Bear's Breech.*
"Leaves sinnate, unarmed;" stem two or three feet high; leaves oblong, stalked, finely fringed, with some bristles along the nerves; flowers white. July to September. South of Europe. 1548. P.

2. A. Spine'sus. *Prickly Bear's Breech.* "Leaves wing-cleft, thorny;" each segment deeply jagged, and terminated by a spine; leaf-stalks and calyx spiny; spikes three feet high, covered with flowers; upper lip of the corolla purple, lower white, with purple streaks. July to September. Italy. 1629. P.

These plants were formerly called Brank-ursine. The roots and leaves abound in mucilage. The second species seems to be that which adorns the handles of Alcimedon's cups in the third eclogue of Virgil, and also that whose leaves growing accidentally round a basket covered with

a tile gave occasion to Callimachus to invent the Corinthian capital.

XXXIV. BART'SIA, in memory of John Bartsch, a physician, the friend of Linnæus. Nat. ord. *Linn.* Personatæ. *Juss.* Pediculares. 5 Species.

1. *B. Coccinea*. *Scarlet Bartsia*. "Leaves alternate, linear, two toothed on each side;" stem simple; leaves crowded towards the top into a spike, having a single flower to each leaf; calyx tinged towards the tip with deep red; corolla palish; capsule elastic; the whole beautiful. July. North America.

1787. P.

2. *B. Odontites*. *Red Bartsia*. "Leaves lanceolate, serrate, the upper alternate; bunches of flowers leaning one way; anthers smooth;" stem branched; square; calyx purple, hairy; corolla rose-coloured. July to September. Britain. A.

3. *B. Pallida*. *Pale-flowered Bartsia*. "Leaves alternate, lanceolate, entire; floral leaves ovate, toothed;" stem simple, streaked; leaves sessile; spike terminating, leafy; flowers alternate, sessile, purplish. June to September. Hudson's Bay. 1782. P.

XXXV. EUPHRA'SIA, from ευφραίνω, to exhilarate, it being in repute for impaired vision. Nat. ord. *Linn.* Personatæ. *Juss.* Pediculares. 12 Species.

1. *E. Officinalis*. *Common Eye Bright*. "Leaves ovate, obtusely toothed; divisions of the lower lip of

the corolla notched ;" flowers white, streaked with purple, with a yellow spot on the lip : plant small and pretty. July to September. Britain. A.

XXXVI. RHINANTHUS, from $\rho\eta$, the nose, and $\alpha\rho\thetaος$, a flower, the blossom resembling a snout. Nat. ord. Linn. Personatæ. Juss. Pediculares. 10 Species.

1. R. Cris'ta Gal'li. *Yellow Rattle.* "Upper lip of the corolla arched ; calyx smooth ; leaves lanceolate, serrate ;" stem smooth, frequently spotted ; leaves opposite, sessile ; flowers yellow ; upper lip blueish at the tip ; the seeds, when ripe, rattle in the capsule. June to August. Britain. A.

XXXVII. MELAMPY'RUM, from $\muελας$, black, and $\piρως$, wheat, its seeds resembling that grain, but of a darker colour. Nat. ord. Linn. Personatæ. Juss. Pediculares. 7 Species.

1. M. Crista'tum. *Crested Cow Wheat.* "Spikes quadrangular ; floral leaves heart-shaped, tiled, compact, toothed ;" stem rough, much branched ; leaves opposite, entire, linear ; spikes of flowers terminal, yellow, purple, or reddish. July, August. England. A.

We have three other native species, which though like the above, they are very pretty, yet being common enough in woods and pastures, are rarely, if ever, cultivated in the garden. The same remark may be applied to the plants of the three preceding genera.

XXXVIII. LINDE'RIA, from Von Lindern, a physician and botanist of Jena. He published the *Hortus Alsaticus*, 1747. Nat. ord. *Linn. Personatae. Juss. Scrophulariae.* 3 Species.

1. *L. Pyxidaria.* *European Lindernia.* "Leaves oval, entire, sessile; peduncles solitary;" stem smooth, square, brittle; leaves opposite, small, slightly notched; flowers axillary, solitary, pale blue. June to August. South of Europe. 1789. A.

XXXIX. SCROPHULA'RIA, from its supposed use in the cure of scrophula. Nat. ord. *Linn. Personatae. Juss. Scrophulariae.* 26 Species.

1. *S. Scorodo'nia.* *Balm-leaved Fig Wort.* "Leaves heart-shaped, doubly serrate, downy beneath; cluster leafy;" stems two to four feet high, square, leafy; leaves opposite, stalked, three ribbed at the base; peduncles doubly forked; flowers rather small, palish dusky purple. England. May to August. P.

2. *S. Orientalis.* *Hemp-leaved Fig Wort.* "Leaves lanceolate, sharply serrate, opposite or whorled, eared at the base; cluster leafless, with downy clammy branches in a sort of corymbus; flowers drooping; calyx smooth, obtuse;" leaves three or four in a whorl, spreading, stalked; cluster terminal, long; flowers greenish. August. The Levant. 1710. P.

3. *S. Alta'ica.* *White-flowered Fig Wort.* "Leaves heart-shaped, nearly smooth, doubly toothed, somewhat lobed; cluster terminal, compound; floral leaves

lanceolate; calyx acute;" stem furrowed; leaves ribbed, on long stalks; flowers yellowish white. June. Siberia. 1786. P.

4. S. Trifolia'ta. *Three-leaved Fig Wort.* "Leaves smooth, roundish, coarsely serrated; lower leaves ternate; stalks axillary, about three flowered;" stem smooth, thick; leaves opposite, fleshy, glaucous; flowers axillary, large, two or three on a stalk; corolla pale yellow, with a rose-coloured border. May to September. Africa. 1731. B.

5. S. Cani'na. *Wing-leaved Fig Wort, or Dog's Rue.* "Leaves pinnate; leaflets decurrent, cut; stem round; cluster leafless, terminal; peduncles two forked;" stem slightly angular, leafy, smooth; leaves dark green; flowers from three to ten, with a flower in the fork; border of the calyx membranous; tube of the corolla yellowish green; two segments of the border red, two orange, and one green. June to August. South of Europe. 1683. P.

6. S. Peregrina. *Nettle-leaved Fig Wort.* "Leaves heart-shaped, acute, simply serrate, smooth, shining; peduncles axillary, two or three flowered; floral leaves lance-shaped; calyx acute;" stem with five or six angles; flower-stalks rising along the stem from nearly the bottom to the top. June to August. Italy. 1640. B.

7. S. Sambucifo'lia. *Elder-leaved Fig Wort.* "Lower leaves interruptedly pinnate, upper ternate; leaflets heart-shaped, serrate, smooth; flower-stalks

axillary, slightly branched :" an herb thick, smooth, succulent, glaucous ; flowers large, axillary, drooping ; corolla pale purplish tawny hue, with a green border. July to September. Spain. 1640. P.

8. *S. Lu'cida*. *Shining-leaved Fig Wort*. "Leaves pinnate ; fleshy, smooth ; leaflets wing-cleft, decurrent, cut ; stem round ; cluster leafless ; its branches forked ;" flowers in somewhat of a cyme ; four uppermost segments of the corolla blood red, the fifth green ; the whole much resembling *S. Canina* ; capsule twice the size. June to August. The Levant. 1596. P.

The whole genus is more or less foetid when bruised, and of a noxious quality to most of the larger animals. Nos. 4. 7, 8. are the species usually cultivated ; the rest being rarely seen unless in botanic gardens.

XL. *CEL'SIA*, named by Linnaeus in honour of Olaus Celsius, a professor of Greek in the University of Upsal. Nat. ord. *Linn.* Luridæ. Juss. Solanææ. 5 Species.

1. *C. Orienta'lis*. *Oriental Celsia*. "Leaves twice pinnate ;" stem a foot and a half high, herbaceous, leafy ; leaves alternate, scattered, smooth, more properly twice wing-cleft than twice pinnate ; flowers pale yellow, small, solitary, sessile, axillary ; segments of the calyx narrow, cleft. August. The Levant. 1713. A.

XLI. *SIBTHORP'IA*, named by Linnaeus in honour

of Dr. Humphrey Sibthorp, professor of botany at Oxford, the father of the celebrated botanist, who collected plants in Greece. Nat. ord. Linn. Personatae. Juss. Pediculares. 1 Species.

1. S. Europæa. *Cornish Money Wort.* Stems creeping, branched, slender, delicate, leafy; leaves alternate, stalked, kidney-shaped, rather fleshy, hairy; flowers axillary, solitary, on short hairy stalks; corolla pale greenish yellow, with a purple tinge in the upper segments. July, August. England. P.

XLI. DIGITALIS, from *digitale*, the finger of a glove, which these flowers resemble. Nat. ord. Linn. Luridæ. Juss. Scrophulariæ. 12 Species.

1. D. Purpu'rea. *Purple Fox Glove.* "Leaflets of the calyx ovate, acute; corolla obtuse, upper lip entire; leaves downy;" stem erect, three or four feet high; leaves large, oval, crenate, downy; flowers large, numerous, in a long spike, crimson, sometimes white sprinkled with eye-like dots within. July, August. Britain. B.

2. D. Mi'nor. *Dwarf Spanish Fox Glove.* "Leaflets of the calyx lanceolate; corolla obtuse, upper lip slightly two lobed; leaves even;" stem half as tall as the preceding; flower-stalks woolly; leaves sessile, lanceolate, not wrinkled; flowers nearly as the former; dots of the palate more copious; anthers with rusty-coloured dots. July. Spain. 1789. P.

3. D. Thap'si. *Mullein Fox Glove.* "Segments

of the calyx oblong; corolla obtuse, its upper lip undivided; leaves downy, decurrent," veined, serrate; corolla purple; throat pale, sprinkled with red dots, smaller than *D. Purpurea*, from which, and *Verbascum Thapsus*, it is thought to be a hybrid production. May to August. Spain. 1752. P.

4. *D. Ambigua*. *Greater Yellow Fox Glove*. "Segments of the calyx lanceolate; upper lip of the corolla notched; leaves downy beneath;" flowers large, yellow, spotted within with brown dots; leaves elliptic, toothed. July, August. The Alps. 1596. P.

5. *D. Lu'tea*. *Smaller Yellow Fox Glove*. "Segments of the calyx lanceolate; corolla acute, its upper lip cloven;" leaves oblong, obtuse; stem slender; flowers small, yellow, not spotted, in a long dense spike, ranged on one side. August. Italy. 1629. P.

6. *D. Lan'ta*. *Woolly Fox Glove*. "Segments of the calyx lanceolate, woolly; side lobes of the lower lip of the corolla acute, middle lobe oblong, flat, smooth;" flowers in crowded spikes; floral leaves lanceolate, woolly, longer than the calyx; leaves lanceolate, smooth, somewhat three nerved; corolla irregular, tubular, bell-shaped, reddish white, lower lip streaked; throat variegated. July. Hungary. 1789. P.

7. *D. Ferrugi'nea*. *Iron-coloured Fox Glove*. "Segments of the calyx ovate, obtuse, spreading; lower lip of the corolla bearded;" stem six feet high; leaves sessile, lanceolate, marked with lines, entire; flowers in upright bunches from the upper axils; corolla

downy, rusty-coloured, yellowish within. August. Italy. 1596. P.

8. D. Obscu'ra. *Willow-leaved Fox Glove.* "Leaves linear, lance-shaped, entire, connected at the base;" stem rather shrubby; leaves crowded; flowers drooping, obtuse, yellowish within, veined, and red at the bottom, pale red without; upper lip half cloven and recurved. August. Spain. 1778. P.

9. D. Canarien'se. *Canary Shrubby Fox Glove.* "Segments of the calyx lanceolate; corolla two lipped, acute;" stem shrubby, five or six feet high, branched; leaves lanceolate, rough; flowers in a long spike, orange intermixed with yellow. June, July. The Canary Islands. 1698. Gr. Ho. S.

Of this handsome genus the first species is the one so much used in medicine; it has a nauseous and virulent flavour; its effect in lowering the pulse is remarkable: later practitioners have employed it chiefly in dropsical cases.

XLIII. BIGNO'NIA, named by Tournefort in honour of the Abbe Bignon, librarian to Louis XIV. Nat. ord. Linn. Personatæ. Juss. Bignonizæ. 54 Species.

1. B. Catal'pa. *Common Catalpa Tree.* "Leaves simple, heart-shaped; stem erect; seeds winged;" a deciduous tree, thirty feet high, with large lateral branches; flowers in panicles towards the end of the branches, of a dirty white, with a few purple spots

and faint stripes of yellow within : later botanists have made Catalpa a distinct genus. August. North America. 1726. T.

2. B. Capreola'ta. *Four-leaved Trumpet Flower.*
"Leaves conjugate, ending in a tendril ; leaflets heart lance-shaped ;" lower leaves simple : a twining shrub sending out many branches ; it rises to a great height ; leaves by fours, downy beneath ; flowers in loose panicles, shaped like Digitalis, of a pale yellow. July. North America. 1710. S.

3. B. Ra'dicans. *Ash-leaved Trumpet Flower.*
"Leaves pinnate ; leaflets ovate, acute, toothed ; corymbus terminal ;" stem with rooting joints, climbing against walls, into the mortar of which they strike ; leaves opposite at every joint ; flowers with long swelling tubes, orange-coloured. August. North America. 1640. S.

4. B. Sempervi'rens. *Carolina Yellow Jasmine.*
"Leaves simple, lanceolate ; stem twining," slender, rising to a great height when supported ; leaves opposite at each joint ; flowers at each joint, two or four, erect, trumpet-shaped, yellow, sweet scented ; leaves evergreen in Carolina, but here deciduous. July. North America. 1640. S.

The Bignonias are chiefly trees and shrubs inhabitants of hot climates in both Indies, and are eminently beautiful. The last species does not very well accord with the generic character. B. Catalpa has only two perfect stamens, and three small rudiments of others.

XLIV. BUCHNE'RA, named by Linnæus in honour of A. E. Buchner, a German naturalist. Nat. ord. *Linn. Personatæ.* *Juss. Pediculares.* 14 Species.

1. B. America'na. *American Bucknera.* "Leaves toothed, lanceolate, three nerved;" stem scarcely branched; spike with remote flowers, whitish; two of the stamens in the throat of the corolla, and two in the tube: the plant turns black with drying. June to August. North America. 1733. P.

XLV. ERI'NUS, from ερις, a plant in Dioscorides, the meaning of the name unknown. Nat. ord. *Linn. Personatæ.* *Juss. Pediculares.* 7 Species.

1. E. Alpi'nus. *Alpine Erinus.* "Flowers in bunches; leaves spoon-shaped;" dwarf stems forming tufts; flowers numerous, purple: a pretty little plant for rock work. April. Switzerland. 1739. P.

XLVI. ANTIRRHI'NUM, from ἀντί, equal, and ρίς, the nose, some species resembling the nostrils. Nat. ord. *Linn. Personatæ.* *Juss. Scrophulariæ.* 70 Species.

* *Leaves angular.*

1. A. Cymbala'ria. *Ivy-leaved Toad Flax.* "Leaves heart-shaped, five lobed, alternate; stalks procumbent;" stem striking root: flowers axillary, solitary, violet, with a yellow palate; growing on the crevices of old walls, especially near water. May to November. England. P.

2. A. Cirrho'sa. *Tendriled Toad Flax.* "Leaves halbert-shaped, alternate; stems spreading; leaf-stalks every where tendriled;" stems thread-form, very branching; peduncles axillary, one flowered; corolla blueish, with a whitish palate, spotted with purple. July. Egypt. 1777. A.

** *Leaves opposite.*

3. A. Triphyl'lum. *Three-leaved Toad Flax.* "Leaves ternate, ovate; stem branching, upright;" leaves sometimes in pairs; flowers yellow, with saffron-coloured lips: one variety has a purple spur. June to September. Sicily. 1596. A.

4. A. Purpu'reum. *Purple Toad Flax.* "Leaves in fours, linear; stem erect, bearing the flowers in a spike;" leaves smooth, three veined beneath; corolla purple, paler without, downy at the edge. July to September. South of Europe. 1648. P.

5. A. Spar'teum. *Branching Toad Flax.* "Leaves awl-shaped, channeled, fleshy, the lower ternate; stem panicled; corolla smooth;" stem about a foot high, smooth, erect, stiff; flowers bunch-like, yellow, with a tinge of red at the palate. June to October. Spain. 1772. A.

6. A. Supi'num. *Trailing Toad Flax.* "Leaves somewhat in fours, linear; stem diffuse; flowers bunch-like;" spur of the corolla straight; upper lip of the calyx longer; corolla dark purple. July. Spain. 1728. A.

7. A. *Pelisseria'num.* *Violet-coloured Toad Flax.*
 " Stem leaves linear, alternate; root leaves lanceolate, ternate; flowers in a corymbus;" stem about eight inches high, a little branching; leaves remote, fleshy, smooth; corolla purple, with a white palate, marked with obscure veins. July. Italy. 1640. A.

8. A. *Multicaule.* *Many-stalked Toad Flax.*
 " Leaves in fives, linear, fleshy; flowers in heads;" stems several, about a foot high, bearing either deep yellow or sulphur-coloured flowers; upper leaves in pairs, or single. May to July. Sicily. 1728. A.

9. A. *Alpi'num.* *Alpine Toad Flax.* " Leaves nearly in fours, linear, lanceolate, glaucous; stem diffuse; flowers in racemes; spur straight;" stem about five inches high; flowers violet-coloured, of a deep yellow in the middle. July to November. Switzerland. 1570. P.

10. A. *Repens.* *Creeping Toad Flax.* " Leaves linear, crowded, glaucous, in whorls or scattered; stem panicled; calyx smooth, as long as the spur;" corolla ash-colour, upper lip streaked with purple, sometimes sweet smelling. July to October. England. P.

*** *Leaves alternate.*

11. A. *Dalmat'icum.* *Dalmatian Toad Flax.*
 " Leaves alternate, heart-shaped; stem clasping," woody, three feet high; flowers large, yellow, axillary, in short loose spikes. July. The Levant. 1731. A.

12. A. Hir'tum. *Shaggy-leaved Toad Flax.*
 "Leaves lanceolate, shaggy; flowers spiked; upper lip of the calyx largest;" stem simple, a foot and a half high; flowers pale yellow with dark stripes and deep yellow lips. June to September. Spain.

1759. A.

13. A. Genistifo'lium. *Broom-leaved Toad Flax.*
 "Leaves lanceolate, acuminate; panicle slender, flexuose;" stem erect, much branched, about three feet high; flowers bright yellow, in loose spikes. August. Austria. 1704. P.

14. A. Jun'ceum. *Rush-like Toad Flax.* "Leaves linear, alternate; stem panicled, slender; flowers in racemes;" upper lip of the corolla white, with blue streaks; lower pale yellow. August. Spain.

1770. A.

15. A. Lina'ria. *Common Toad Flax, Butter and Eggs.* "Leaves linear, lanceolate, crowded; stem erect, spiked; flowers sessile, tiled;" calyx smooth, shorter than the spur; corolla yellow, with an orange palate, woolly; nectary long. June to September. Britain. P.

16. A. Chalepen'se. *White-flowered Toad Flax.*
 "Leaves linear, lanceolate, alternate; flowers in racemes; calyx longer than the corolla; stem erect," about two feet high; flowers small, white, with long spurs; they are produced singly, and extend over the whole of the branches. July. The Levant.

1680. A.

**** *Corollas without a spur.*

17. A. *Majus*. *Great Toad Flax, or Snap Dragon.* "Flowers without tails, in spikes, pointing one way; calyx obtuse, woolly;" stem from one to two feet high; leaves lanceolate or ovate; corolla violet, lower lip white, mouth yellow, but the varieties of colour in all its parts are endless. June to August. England. B.

18. A. *Asari'na*. *Heart-leaved Toad Flax.* "Corollas without tails; leaves opposite, heart-shaped, crenate; stems procumbent," trailing; flowers of a dingy purple above, greenish below. July. Italy. 1699. P.

19. A. *Bellidifolium*. *Daisy-leaved Toad Flax.* "Root leaves tongue-shaped, toothed, marked with lines; stem leaves parted, entire;" flowers very small and numerous, in a long spike; corolla blue; stem branched, about two feet high. June to August. France. 1629. B.

It is doubted whether the Great Snap Dragon be truly indigenous; it is commonly found throughout the South of Europe: on old garden walls it presents a handsome appearance. A. *Linaria* occasionally varies into a regular pentandrous plant with five stamens. Most of the species are pretty, and require but little culture.

XLVII. GERAR'DIA, in honour of John Gerarde, our old English Botanist, author of the Herbal, 1597. Nat. ord. Linn. Personatæ. Juss. Scrophulariæ. 12 Species.

1. G. Purpu'rea. *Purple Gerardia*. "Leaves linear, most entire; flowers somewhat sessile;" stems simple, smooth; corolla deep purple, varying in figure, wheel-shaped, bell-shaped, or tubular. It is doubted whether this or any of the species now remain in English gardens. July. North America. 1772. A.

XLVIII. PEDICULA'RIS, from *pediculus*, a louse; it having the supposed quality of making sheep lousy that feed upon it. Nat. ord. *Linn. Personatæ. Juss.* Pediculares. 34 Species.

1. P. Palus'tris. *Marsh Louse Wort, or Tall Red Rattle*. "Stem solitary, branched; calyx ovate, hairy, ribbed; lower lip of the corolla larger;" stem about fifteen inches high, angular, leafy; leaves doubly wing-cleft; flowers numerous, rose-coloured, axillary. July. Britain. P.

2. P. Sylva'tica. *Common Louse Wort*. "Stems several, simple, spreading; calyx oblong, angular, smooth, unequally five-lobed; radical leaves ovate;" upper leaves doubly wing-cleft; flowers rose-coloured. May to July. Britain. P.

These are very pretty plants, notwithstanding their unpromising name; the rest of the genus are Alpine plants, growing at a great elevation, and though inserted in many catalogues, have never been cultivated with any sort of success in English gardens.

XLIX. Mi'MULUS, from *mimus*, a masked actor;

alluding to the form of the corolla. Nat. ord. *Linn.* *Personatæ. Juss.* *Scrophulariæ.* 4 Species.

1. *M. Rin'gens.* *Gaping Monkey Flower.* "Stem erect; leaves oblong, linear, sessile, smooth; flower-stalks longer than the flower;" stem square, jointed; leaves two at each joint, serrate, pointed; flowers solitary, pale violet colour, without smell; seeds yellow. August. North America. 1759. P.

2. *M. Ala'tus.* *Oval-leaved Monkey Flower.* "Stem erect, square, winged; leaves oval on stalks," veined, unequally serrate; stem slightly branched at top, winged with a membrane at each angle; flowers axillary, solitary, on square stalks; corolla like the former. August. North America. 1783. P.

3. *M. Glutino'sus.* *Orange Monkey Flower.* "Stem erect, shrubby, round; leaves sessile, ovate, lanceolate, rather obtuse;" stem about three feet high, much branched, viscid; leaves revolute, veined; flowers orange-coloured, showy, on stalks, two at each joint of the stem. June to August. California. 1794. S. Gr. Ho.

· L. DODARTIA; in honour of Denis Dodart, a French Botanist and Physician, 1678. Nat. ord. *Linn.* *Personatæ. Juss.* *Scrophulariæ.* 2 Species.

1. *D. Orientalis.* *Oriental Dodartia.* "Leaves linear, entire, smooth;" root creeping; stem branched; leaves small, a little fleshy, toothed at the edge; flowers axillary, violet, an inch long: a plant of no great beauty. August. The Levant. 1752. P.

LI. CHELO'NE, from $\chi\lambda\omegaν$, a tortoise. Nat. ord. Linn. Personatæ. Juss. Bignoniacæ. 4 Species.

1. C. Gla'bra. *White Chelone*. "Leaves stalked, lanceolate, obsoletely serrated; upper ones opposite;" root creeping; stems three feet high, erect; flowers white, almost sessile, in short spikes; upper lip vaulted like the back of a tortoise. August to October. North America. 1730. P.

2. C. Obli'qua. *Red Chelone*. "Leaves stalked, lanceolate, oblique, deeply serrated, all opposite;" roots not so widely creeping as the former; flowers bright purple. August to October. North America. 1752. P.

3. C. Barba'ta. *Scarlet Chelone*. "Root leaves stalked, lance spoon-shaped, entire; stem leaves lanceolate, sessile; flower-stalks long; lower lip of the corolla bearded;" leaves opposite; flowers scarlet, nodding, in a terminal panicle; inner part of the corolla clothed with a dense yellow down. June to August. Mexico. P.

LII. PENTSTE'MON, from the flower having a fifth imperfect stamen. Nat. ord. Linn. Personatæ. Juss. Bignoniacæ. 4 Species.

1. P. Pubes'cens. *Hairy Pentstemon*. "Stem downy; leaves embracing the stem; panicle forked;" leaves opposite, lanceolate, entire, or obscurely toothed; lower leaves narrowing to a stalk; flowers purple, whitish about the throat; barren filament, bearded from the point below the middle; the plant varies

with broad or narrow leaves. August. North America. 1758. P.

2. P. Læviga'ta. *Smooth Pentstemon.* "Stem smooth; lower leaves quite entire," ovate, pointed, stalked; upper embracing the stem, lanceolate, toothed; flowers violet, mostly in twos; barren filament bearded at top. August. North America. 1776. P.

3. P. Campanula'ta. *Bell flowered Pentstemon.* "Stem smooth; leaves lanceolate, pointed, all sharply serrated;" stem cylindrical; leaves opposite, sessile, green above, paler beneath; flowers purple, in a long loose spike; upper peduncles single, lower ones flowered. June to October. Mexico. 1793. P.

LIII. SE'SAMUM, σησαμος, which appears to be derived from Sempson, the Egyptian name of the plant. Nat. ord. Linn. Luridæ. Juss. Bignoniae. 4 Species.

1. S. Orienta'le. *Common Sesamum, or Oily Grain.* Leaves ovate, oblong, undivided, the lower ones somewhat serrate; stem about two feet high, branched, leafy; leaves opposite, stalked, finely downy; flowers axillary, stalked, white, about an inch long; calyx and corolla hairy. July. East Indies. 1731. Hot Ho. A.

The oil from the seeds of this plant is used in Egypt and the East in place of Olive Oil; the seeds themselves also have been common as food in those countries, from the most remote antiquity. Those who remember the story of the Forty Thieves in the Arabian Nights, will not forget the magic power of the word Sesame.

LIV. LINNÆ'A, from the immortal Swedish Botanist. It appears to have been chosen by himself in early life, and described as a humble Lapland plant, despised and neglected, like the person whose name it bears. Nat. ord. *Linn.* Aggregate. Juss; Caprifolia. 1 Species.

1. L. Borea'lis. *Two flowered Linnaea.* Stems trailing, round, leafy, reddish; leaves evergreen, stalked, ovate, veiny, crenate, in the fore part, palish beneath; flower-stalks in twos, each bearing a delicate flower, pink within, pale white or yellow without; smelling sweet at night. May, June. Scotland. P.

LV. VI'TEX, from *vīo*, to bind; in allusion to the flexible nature of its twigs. Nat. ord. *Linn.* Personatæ. Juss. Vitices. 13 Species.

1. V. Ag'nus Cas'tus. *Officinal Chaste Tree.* "Leaves digitate, with five or seven lanceolate leaflets, nearly entire, hoary beneath; clusters panicled; flowers whorled;" a low spreading shrub, with long trailing branches; flowers light blue or white. There is an earlier variety, with broader leaflets. September. Sicily. 1570. S.

The seeds of this plant have been celebrated for a marvellous power of promoting chastity, and hence they have been called *Piper Monachorum*, or Monk's Pepper. They cause a degree of nausea and faintness, which may perhaps account for their reputed virtues.

LVI. CYMBA'RIA, from *κυμή*, a boat; alluding

to the shape of the fruit. Nat. ord. *Linn. Personatæ.*
Juss. Scrophulariæ. 1 Species.

1. C. Dau'rica. *Daurian Cymbalaria.* Stems several, a span high; branches few, opposite; leaves opposite, lanceolate, linear, acute; flowers large, yellow, tinged with purple on the inside; much resembling an *Antirrhinum*, but distinguished by its calyx. June, July. Dauria. 1796. P.

LVII. VERBE'NA, corrupted from *herba bona*; in Greek it is *ἱπόβοτανη*, the sacred herb; used in various rites of Pagan worship. Nat. ord. *Linn. Personatæ.* *Juss. Vitices.* 13 Species.

1. V. Bonarien'sis. *Cluster flowered Vervain.* " Spikes aggregate, tufted, level topped; leaves lanceolate, sessile, clasping the stem;" stem often six feet high, square, rough, terminating in copious tufts of blue flowers, in short spikes, on long panicled stalks. July to October. Buenos Ayres. 1732. B.

2. V. Hasta'ta. *Halbert-leaved Vervain.* " Spikes panicled, linear, acute; leaves lanceolate, pointed, doubly serrate, lower ones hastate;" stem from two to five feet high; flowers purple, sometimes white. June to August. Canada. 1710. P.

3. V. Triphyl'la. *Three-leaved or Lemon scented Vervain.* " Spikes panicled; leaves lanceolate, minutely and distantly toothed, three in a whorl; stem shrubby;" leaves of a light bright green, roughish, of

a delightful odour when rubbed ; flowers small, pale lilac. May to September. Chili. 1784. S. Gr. Ho.

4. V. *Carolinia'na*. *Carolina Vervain*. "Spikes aggregate, lax and slender ; leaves elliptic, lanceolate, serrate, nearly sessile, rough above, downy beneath," harsh, with minute bristly tubercles ; flowers pale red, very small. June to September. North America. 1732. P.

5. V. *Urticifo'lia*. *Nettle-leaved Vervain*. "Spikes aggregate, lax and slender ; leaves ovate, acute, serrate, stalked, hairy on both sides," nettle-like ; flowers very small, white ; a taller plant than the last. July to September. North America. 1683. P.

6. V. *Stric'ta*. *Upright Vervain*. "Spikes aggregate, corymbose, straight, acute, obtuse ; floral leaves taper-pointed ; leaves ovate, on short stalks, unequally serrate, hoary on both sides ;" a tall stout plant ; stem stiff, clothed with numerous leathery leaves ; corolla large, of a violet blue. June to August. The Illinois. 1802. P.

7. V. *Auble'tia*. *Rose-coloured Vervain*. "Spikes capitate, solitary, cylindrical after flowering ; floral leaves awl-shaped ; leaves three lobed, cut ;" stem erect, square, leafy, branched ; flowers pink or crimson, numerous, in stalked heads, which afterwards become close spikes. July. North America. 1774. B.

8. V. *Officina'lis*. *Common Vervain*. "Spikes slender, panicled ; floral leaves ovate ; leaves deeply

cut; stems mostly solitary, somewhat prickly; flowers small, pale lilac, in acute spikes, at first dense, afterwards becoming long. June to September. Britain. B.

9. V. Supi'na. *Trailing Spanish Vervain.* "Spikes thread-shaped, solitary; floral leaves shorter than the calyx; stems decumbent, branched; leaves doubly wing-cleft," but somewhat downy, spreading every way; spikes terminal and axillary; flowers small, light purple, becoming distant as the seeds ripen. July. Spain. 1640. A.

The Common Vervain is destitute of odour, and possesses a slight degree only of bitterness, yet it has been in high occasional repute for many ages as a sovereign remedy for all sorts of disorders. It is a plant of but little beauty, yet was used not only by the Greeks and Romans in their sacrifices and sacred rites, but also by the Druids in their incantations—such is the caprice of fortune. The delightful V. Triphylla of modern introduction seems of more value than all the mysterious qualities of the ancient species.

LVIII. MELIAN'THUS, from μέλι, honey, and ἄνθος, a flower. Nat. ord. *Linn.* Corydales. Juss. Rutaceæ. 3 Species.

1. M. Ma'jor. *Greater Honey Flower.* "Stipules solitary, adhering to the leaf-stalk;" stems numerous, four feet high, herbaceous towards the top; leaves pinnate, embracing the stem, greyish; leaflets three or four pairs, ovate, deeply toothed, and an odd leaflet; flowers in a longish spike of a chocolate co-

hour. Linnaeus observes that if the plant be shaken whilst in flower it distils a shower of nectar. May to July. Cape of Good Hope. 1688. S. Gr. Ho.

2. M. Mi'nor. *Lesser Honey Flower.* " Stipules in pairs, but separate; clusters axillary, elongated; floral leaves linear, tapering;" stems branched, soft; leaves about half as large as the preceding, whitish beneath; flowers six or eight in a cluster, variegated with green, yellow, red, or pink; honey not very copious. August. The Cape. 1696. S. Gr. Ho.

CLASS XV.

TETRADYNAMIA.

*Order Siliculosa.*1. *Silicle entire, not notched at the end.*

i. DRABA. Pouch entire, long, oval; valves flattish, parallel on the partition; style scarcely any.

ii. LUNARIA. Pouch elliptical, flat, stalked, naked; valves equal, and parallel to the partition; calyx leaves bagged at the base.

iii. MYAGRUM. Pouch without valves, crowned with the conical style, single seeded; with two empty cells above.

iv. VELLA. Pouch tumid, crowned with the leafy ovate style; cotyledons folded; calyx closed.

v. BUNIAS. Pouch without valves, deciduous, four sided, with unequal acute angles, not opening.

vi. CRAMBE. Pouch globular, one celled, without valves, leathery, mostly one seeded, deciduous; four longer filaments forked, one of the tips anther bearing.

2. *Silicle emarginate, or notched at the end.*

vii. IBERIS. Corolla irregular, two outer petals largest; pouch inversely heart-shaped; many seeded.

VIII. **ALYSSUM.** The two shorter filaments marked on the inside with a little tooth; pouch roundish, slightly notched, crowned with the style; the valves concave, and parallel with the partition.

IX. **CLYPEOLA.** Pouch roundish, flat, compressed, one seeded, slightly notched, deciduous; filaments toothed.

X. **PELTARIA.** Pouch nearly round, entire, compressed, of one cell, not bursting; with one to three seeds.

XI. **COCHLEARIA.** Pouch gibbous, rugged; valves gibbous, obtuse; seeds several; calyx spreading.

XII. **LEPIDIUM.** Pouch notched, elliptical, with few seeds; valves keeled contrary to the partitions; petals of the corolla equal.

XIII. **THLASPI.** Pouch compressed, notched, inversely heart-shaped; valves boat-shaped, keeled; seeds several.

XIV. **ISATIS.** Pouch lanceolate, one celled, single seeded, deciduous; with two boat-like valves.

XV. **BISCUTELLA.** Pouch compressed, flat, rounded above, two lobed below; leaflets of the calyx gibbous at the base.

XVI. **ANASTATICA.** Pouch swelling, crowned at the edge with valves twice as long as the partition; style awl-shaped; seeds solitary.

Order Siliquosa.

1. *Calyx closed, its leaflets approaching lengthwise.*

xvii. RAPHANUS. Calyx closed; nectariferous glands four; pod swelling out into knobs, imperfectly jointed, without valves.

xviii. ERYSIMUM. Pod straight, columnar, exactly square; calyx leaves cohering; stigma capitate.

xix. CHEIRANTHUS. Germ furnished on each side with a small glandular tooth; calyx closed, two of its leaflets gibbous at the base; seeds flat.

xx. HESPERIS. Petals bent obliquely; a gland within side of the shorter stamens; pod straight; calyx closed, two of its leaflets gibbous at the base.

xxi. ARABIS. Glands four, one within each leaf of the calyx, oblong, scale-like, reflected; calyx close, two of its leaflets gibbous at the base; pod linear, swelling at the seeds, crowned with the nearly sessile stigma.

xxii. BRASSICA. Calyx erect, the leaflets a little converging; seeds globular; pod flattened; partition prominent; nectariferous glands four.

xxiii. TURRITIS. Pod very long, straight, linear, two edged, its valves ribbed and keeled; calyx closed, erect; corolla erect.

xxiv. DENTARIA. Pod bursting elastically, the valves rolling back, shorter than the partition; stigma notched; calyx leaves cohering lengthwise.

xxv. RICOTIA. Pod of one cell, oblong, com-

pressed, sessile; valves flat; seeds mostly four, roundish, compressed.

2. Calyx spreading, the leaflets distant at top.

XXVI. CLEOME. Pod one celled, two valved, three nectariferous glands, one at each division of the calyx, except the lowest; petals of the corolla ascending; seeds numerous.

XXVII. CARDAMINE. Pod bursting elastically, its valves rolled spirally backwards, equalling the partition; stigma entire; calyx a little spreading.

XXVIII. SINAPIS. Calyx widely spreading; claws of the petals straight; nectariferous glands four; pod more or less cylindrical, the partition longer than the valves.

XXIX. SISYMBRIUM. Pod cylindrical, bursting; valves nearly straight; calyx and corolla spreading.



CLASS XV.

TETRADYNAMIA.

Order Siliculosa.

I. DRA'BA, the name of a plant in Dioscorides, δράβη: the word is supposed to mean acrid or pungent. Nat. ord. Linn. Siliquosæ. Juss. Cruciferae.
16 Species.

1. D. Ver'na. *Common Whitlow Grass.* "Scapes naked; petals cleft; leaves lanceolate, sparingly serrated, hairy;" flowers in broad topped spikes, about fifteen in each; stems about three inches high, smooth after flowering, hairy when young; petals white: a small plant, growing on walls and gravel walks, and which is an index of climate, as in Sicily it flowers all the winter, in Holland and England in February, in Germany in March, and in Sweden not till April. Britain. A.

2. D. Aizoï'des. *Sax Green, or Alpine Whitlow Grass.* "Scape naked, smooth; petals notched, as long again as the calyx; leaves lanceolate, rigid, keeled, fringed;" leaves in clustered tufts; blossoms bright yellow, with a pleasant smell: a plant fit for ornamenting rock work. February to April. Wales. P.

3. D. Pyrena'ica. *Pyrenean Whitlow Grass.* "Scape naked; leaves wedge-shaped, palmate, three lobed;" stalk shrubby, about two inches high, dividing into many small heads; flowers in clusters close to the leaves, of a bright purple, May. The Pyrenees. 1759. P.

The flavour of the whole genus is acrid and mustard-like; its reputed virtues in curing whitlows is however little relied on: the rest of the species are mostly of British growth, but not very conspicuous, and consequently very rarely cultivated.

II. LUNA'RIA, from *luna*, the moon, on account of the semi-transparent appearance and orbicular shape

of the seed vessels. Nat. ord. *Linn. Siliquosæ. Juss. Cruciferæ.* 2 Species.

1. L. *Redivi'va. Perennial Honesty.* "Leaves doubly and sharply toothed; pouches egg lance-shaped, acute at each end;" stems about three feet high, erect, round, leafy; leaves heart-shaped, smooth; flowers numerous, large, corymbose, fragrant, crimson; pouch two inches long, scarcely one inch broad, elliptic, making an angle at each end, green or brownish. May, June. Austria. 1596. P.

2. L. *An'nua. Annual Honesty.* "Leaves simply and bluntly toothed; pouch elliptic, rounded at each end;" stem solitary, branched, smaller than the former, cordate, serrate, dull green; calyx ash-colour; petals blue purple, inodorous; seed vessels when ripe becoming transparent, shining, white, like satin. May, June. 1570. Germany. A.

III. *MYAGRUM*, from *μύια*, a fly, and *ἀγρύνω*, to catch, the expressed seeds of one species producing oil. Nat. ord. *Linn. Siliquosæ. Juss. Cruciferæ.* 12 Species.

1. M. *Perfolia'tum. Perfoliate Gold of Pleasure.* "Pouch inversely heart-shaped, sessile; leaves embracing the stem," which is from one to two feet high, alternately branched, leafy; leaves alternate, oblong, obtuse, toothed; base heart-shaped; flowers numerous, small, pale yellow, corymbose. June, July. France. 1648. A.

2. M. Panicula'tum. *Panicled Gold of Pleasure.*
 "Pouch lens-shaped, roundish, dotted, wrinkled;" stem two feet high, erect, round, leafy, branched; leaves oblong, acute, toothed; flowers small, yellow, in numerous clusters; pouch extremely small, scarcely bigger than Mustard seed. July, August. Europe.

1683. A.

3. M. Peren'ne. *Perennial Gold of Pleasure.*
 "Pouch two jointed, one seeded; leaves outwardly sinuate, with small teeth;" stem branched, diffuse, rough; leaves hairy, rough, about four inches long, two broad; flowers yellow, in long loose spikes; lower joints of the pouch commonly abortive. July. Germany. 1789. P.

4. M. Rugo'sum. *Wrinkled Gold of Pleasure.*
 "Pouch grooved, hairy, wrinkled; leaves oblong, obtuse, toothed;" style three times as long as the pouch; leaves hairy, succulent, eared at the base; stems a foot and a half high, brittle, hairy, branching; flowers pale, small, in short loose spikes. July. South of Europe. 1730. A.

5. M. Saxa'tile. *Rock Gold of Pleasure.* "Pouch lens-shaped, obovate, smooth; leaves stalked, oblong, serrate, rugged;" root leaves spreading on the ground; stem a span high, terminated by a corymbbed, many flowered cluster of white flowers; calyx yellowish. June, July. Austria. 1775. P.

6. M. Sativum. *Cultivated Gold of Pleasure.*
 "Pouch obovate, notched, stalked; stigma simple;

leaves lanceolate, arrow-shaped;" stem a foot and a half high, branched towards the top; upper leaves gradually diminishing in size; flowers stalked, in loose spikes; petals small, yellow. May to July. Britain. A.

The last species is cultivated in Germany for the sake of the expressed oil from its seeds, which, in that country, is used for a variety of purposes.

IV. *VEL'LA*, a name used by Galen; it is supposed to be a Celtic word for some sort of cress Latinized. Nat. ord. *Linn.* *Siliquosæ.* Juss. *Cruciferæ.* 2 Species.

1. *V. An'nua*. *Annual Cress Rocket.* "Leaves wing-cleft; pouches pendulous;" stem about a foot high, branched, bushy, leafy, rough with deflexed bristles; leaves alternate, roughish; spikes terminal, many flowered; calyx purplish; petals sulphur-coloured, with purple veins. July. England. A.

2. *V. Pseu'do Cy'tisus*. *Shrubby Cress Rocket.* "Leaves undivided, obovate, fringed; pouches erect;" stem shrubby, branched, roughish, two feet high; leaves alternate, rather fleshy, tapering down to the foot-stalk; flowers in long spikes, yellow, with pale veins: a curious and rather hardy green-house shrub. April, May. Spain. 1759. S.

V. *BUNIAS*, from *Bourros*, a hill. Nat. ord. *Linn.* *Siliquosæ.* Juss. *Cruciferæ.* 11 Species.

1. B. Ca'kile. *Sea Rocket Bunias.* "Pouch ovate, two edged, smooth, one seeded; leaves fleshy;" stem branched, woody, zigzag; leaves alternate, thick, succulent, glaucous, wing-cleft; flowers pale purple, in dense terminal corymbs, growing into spikes. June to September. Britain. A.

2. B. Eruca'go. *Prickly-podded Bunias.* "Pouch four angled, beaked; angles two crested; lower leaves lyre-shaped; lobes opposite, triangular;" stems numerous, slender, spreading; flowers yellow, in loose terminal clusters; pouch with a rough surface. July. Austria. 1640. A.

3. B. Orientalis. *Oriental Bunias.* "Pouch ovate, gibbous, warty; lower leaves runcinate, lyre-shaped, upper lanceolate;" stems herbaceous, branched, about two feet high; flowers yellow, in long terminal clusters; rind of the pouch fungous, straw-coloured. May to July. The Levant. 1731. P.

4. B. Myagroides. *Myagrum-like Bunias.* "Pouch two edged, two jointed, a little swelling above; leaves pinnate, with reflected divisions;" stem irregularly branched; clusters terminal, long, straight; flowers nearly sessile, pale purple. July, August. The Levant. 1680. A.

This genus, like the last but one, *Myagrum*, is perplexed and obscure, and like that, the different species have been removed from it by modern botanists: the plants, having no particular attraction, are rarely seen unless in botanic gardens. The species not detailed have an equal

claim for admission with those which are, except that of being more recently introduced.

VI. CRAM'BE, from *κραυβός*, arid, on account of its growing in a dry soil. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ. 8 Species.

1. C. Mari'tima. *Colewort, or Sea Kale.* " Stem and leaves smooth; leaves sinuated, undulated, glaucous;" root fleshy, spreading; stems several, proceeding from the crown of the root, about two feet high; lower leaves stalked, spreading, variously jagged and indented, sometimes purplish; flowers large, white, clustered in several corymbs, forming altogether a dense panicle: the plant is much cultivated for its young shoots in the Spring, which, when blanched, are esteemed little inferior to Asparagus. June. Britain. P.

2. C. Orientalis. *Oriental Colewort.* " Leaves oblong, wing-cleft, runcinate, scabrous; stem smooth;" root leaves greyish; stems three or four feet high, much branched; flowers small, white, numerous, in a large, loose, terminal panicle. June, July. The Levant. P.

3. C. Hispa'nica. *Spanish Colewort.* " Whole plant rough with short hairs; leaves pinnate, lyrate, terminal lobe very large, kidney-shaped, obtuse;" stem scored, branched; leaves alternate; flowers white, in somewhat branching clusters. July. Spain.

VII. *I'BERIS*, supposed from *Iberia*, its place of growth. Nat. ord. *Linn.* *Siliquosæ*. *Juss.* *Cruciferæ*. 18 Species.

1. I. *Sempervi'rens*. *Narrow-leaved Evergreen Candy Tuft*. "Shrubby; leaves oblong, linear, entire, smooth; flowers in clusters, corymbose;" stems six or eight inches high, rather herbaceous; leaves continuing green throughout the year; flowers white, numerous. April to June. 1731. E. S.

2. I. *Saxa'tilis*. *Rock Candy Tuft*. "Somewhat shrubby; leaves lanceolate, linear, fleshy, acute, entire, fringed;" stems diffused, numerous, three or four inches high; leaves clustered; stems and branches almost naked at top, terminating in a corymb of white or purple flowers. April to June. France. 1739. P.

3. I. *Umbella'ta*. *Purple Candy Tuft*. "Herbaceous; leaves lanceolate, acuminate, the lower serrate, the upper quite entire;" stems upright, leafy, a span high, smooth, branching; leaves frequent, alternate, lanceolate, acuminate, smooth; flowers in a hemispherical corymb, on stalks half an inch long; outer petals more than twice as large as the inner ones, pale purple, sometimes darker, sometimes white. June, July. South of Europe. 1596. A.

4. I. *Ama'ra*. *Bitter Candy Tuft*. "Herbaceous; leaves lanceolate, acute, somewhat toothed; flowers in racemes;" stem somewhat rugged; branches diffused; flowers white, in a terminating spike-like

bunch : plant much resembling the preceding, but smaller. June, July. England. A.

5. I. Rotundifo'lia. *Round-leaved Candy Tuft.* "Herbaceous ; leaves ovate ; stem leaves clasping, smooth, entire ;" stem procumbent, leafy ; leaves soft, smooth ; root leaves stalked ; flowers almost regular, in dense corymbs, purple ; calyx reddish. May to July. Switzerland. 1759. P.

6. I. Pinna'ta. *Wing-leaved Candy Tuft.* "Herbaceous ; leaves wing-cleft ; stem erect, panicled ; petals three times as long as the calyx ;" stem six inches high, commonly simple ; flowers in a corymb, clear white, seldom purple ; calyx red. June to August. South of Europe. 1596. A.

VIII. ALYS'SUM, from α, contrary, and νοσα, madness, it being supposed to cure the bite of a mad dog. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ.
31 Species.

* *Somewhat shrubby.*

1. A. Mari'timum. *Sweet Alyssum, or Mad Wort.* "Stems procumbent, perennial ; leaves lanceolate, linear, acute and quite entire ;" stems spreading, producing at the ends of the branches pretty tufts of small white flowers. This plant was formerly called A. Halimifolium. June to November. England. S.

2. A. Saxa'tile. *Rock Mad Wort, or Yellow Alyssum,* "Stems shrubby, panicled ; leaves lanceolate,

very soft, lyrate, sinuate ; petals entire ;" stem about a foot high, fleshy, dividing into several small branches ; flowers in loose panicles, terminating, of a bright yellow. April, May. Candia. 1710. S.

3. A. Alpes'tre. *Italian Mad Wort.* "Stems somewhat shrubby, diffused ; leaves roundish, hoary ; calyxes coloured" and deciduous ; petals entire, yellow ; stamens with a little membrane at the base. June to October. Italy. 1777. S.

** *Stems herbaceous.*

4. A. Inca'num. *Hoary Mad Wort.* "Stem erect ; leaves lanceolate, hoary, quite entire ; flowers in corymbs ; petals cleft ;" stems about two feet high, branchy, rather woody ; flowers in round terminal bunches, small, white ; pouch oval, full of brown seeds. July to September. North of Europe. 1640. B.

5. A. Calycinum. *Small flowered Mad Wort.* "Stamens all toothed, calyxes permanent ;" petals small, yellow, growing white with age ; pouch slightly notched, pubescent ; leaves lanceolate. July, August. Austria. 1740. A.

6. A. Monta'num. *Mountain Mad Wort.* "Stems diffused ; leaves somewhat lanceolate, dotted with prickles ;" branches trailing ; leaves hoary, rough, alternate ; flowers in small terminal clusters, of a dark yellow ; four of the filaments cleft. July, August. Germany. 1713. P.

7. A. Clypeatum. *Buckler podded Mad Wort.*
 " Stem erect; pouches sessile, oval, compressed, flat; petals pointed, linear;" leaves oblong, hoary, alternate; flowers axillary, solitary; pouch compressed. July. South of Europe. 1596. A.

8. A. Sinuatum. *Sinuate-leaved Mad Wort.*
 " Stem herbaceous; leaves lance-dotted; pouch inflated;" a low spreading plant, dividing into small branches, garnished with hoary leaves throughout the year; flowers terminal, of a bright yellow. April to June. Spain. 1596. B.

9. A. Cre'ticum. *Cretan Mad Wort.* " Stem shrubby; leaves lanceolate, a little toothed, downy; pouch inflated, globular;" branches few, lateral, near the top of the stem; leaves oblong, hoary; flowers in small terminal clusters. April to August. Crete. 1739. P.

10. A. Utricula'tum. *Bladder Mad Wort.* " Stem herbaceous, erect; leaves smooth, lanceolate, quite entire; pouch inflated;" flowers like those of Lunaria; seeds many, flat, winged. April to June. The Levant. 1739. P.

11. A. Deltoi'deum. *Purple Mad Wort.* " Stem rather woody, prostrate; leaves lance-deltoid; pouch shaggy;" raceme simple, few flowered; flowers resembling those of the stock, purple; calyx oblong, closed, gibbous at the base. March to May. The Levant. 1710. P.

These plants flourish best in a dry and poor soil, or upon walls; and make a pleasing variety in ornamenting rock-work.

IX. CLYPE'OLA, diminutive of *clypeus*, a shield; from the form of the silicle. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ. 1 Species.

1. C. Ionthias'pi. *Annual Treacle Mustard.* Pouch roundish, one celled, one seeded; stems a span high, slender, weak; leaves linear, spoon-shaped, small, alternate, sessile, glaucous, with minute hairs; flowers yellow, small, in a small terminal spike; a plant seldom seen, unless in botanical gardens. May to July. France. 1710. A.

X. PELTA'RIA, from *pelta*, a shield or target; in allusion to the shape of the silicle. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ. 3 Species.

1. P. Allia'cea. *Garlick Scented Peltaria.* "Leaves embracing the stem, oblong, undivided;" stem a foot high, branched; leaves heart-shaped, smooth; flowers white, rather small, in several terminal, slender stalked corymbs; plant when bruised of an unpleasant garlick scent. May to July. Austria. 1601. P.

XI. COCHLEA'RIA, from *cochleare*, a spoon; on account of the form of the leaves. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ. 11 Species.

1. *C. Officinalis*. *Common Scurvy Grass*. "Root leaves roundish; stem leaves oblong, somewhat serrate; fruit globular;" stems branched, angular, leafy; flowers white, in terminal corymbs; herb smooth, rather fleshy, very various in size; taste warm, acrid; smell pungent when bruised. April, May. Britain. A.

2. *C. Glastifolia*. *Woad-leaved Scurvy Grass*. "Stem leaves heart arrow-shaped, embracing the stem;" stem from three to five feet high, erect, leafy, smooth, with a few short branches; lower leaves oblong, narrowed into the stalk; flowers white, small, in short alternate bunches, forming an elongated panicle. May to July. Germany. 1648.

3. *C. Armoricaria*. *Horse-radish*. "Root leaves oblong, crenate; stem leaves lanceolate, gashed, or entire;" root perennial, spindle-shaped, long, durable, acrid; stems two feet high, erect, leafy; root leaves stalked, very large, sometimes wing cleft; flowers white, in loose panicles. May. England. P.

The first species has been long considered as the most effectual of antiscorbutic plants; it is eaten as a salad with water cresses and brook-lime. The scraped root of Horse-radish is well known in culinary use; an infusion in cold milk is said to be one of the best and safest cosmetics. Some other species may be found in botanic gardens.

XII. *LEPI'DIUM*, λεπίς, a scale; from the scaly appearance of the pods after the seed is discharged.

Nat. ord. *Linn.* Siliquosse. *Juss.* Cruciferæ. 20
Species.

1. *L. Latifo'lium.* *Bread-leaved Pepper Wort, or Dittander.* "Leaves ovate, lanceolate, undivided, serrate;" stems three feet high, erect, leafy; flowers hexandrous, small, white, in many flowered panicles; leaves alternate, narrowed at the base, acrid, pungent; eaten when young in salads. July. Britain. P.

2. *L. Graminifo'lium.* *Grass-leaved Pepper Wort.* "Leaves linear, the upper quite entire; stem panicled, wand-like; flowers hexandrous;" stems round, smooth, even; flowers small, white; calyx tinged with purple. August. Germany. 1683. P.

3. *L. Bonarien'se.* *South American Pepper Wort.* "Flowers two stamened, four petaled; petals minute; all the leaves wing cleft, much cut and divided;" stems about two feet high; leaves in bundles, resembling those of Tansey; of a different flavour from Garden Cress; flowers in oblong spikes; pouch small. June. South America. 1792. A.

4. *L. Pisci'dium.* *South Sea Pepper Wort.* "Leaves oblong, ovate, toothed on the outside, or entire; pouch oblong, ovate, notched; stamens four or six;" leaves scattered, alternate, serrate at the tip; flowers white, in racemes. This plant is esculent; it inebriates fish. September. New Zealand. 1779. A.

5. *L. Perfolia'tum.* *Various-leaved Pepper Wort.* "Lower leaves much divided in a pinnate manner, upper ones heart-shaped, embracing the stem, en-

tire ;" stem a foot high, smooth, tinged with purple, dividing into slender branches; flowers small, yellow, on loose spikes; calyx yellowish green. July. Austria. 1640. A.

6. L. Sativum. *Garden Cress.* "Leaves oblong, much cut and jagged ;" stem upright, smooth, one to two feet high, branched at the top; lower leaflets resembling those of Parsley, upper ones linear; flowers small, white, in spikes; it varies with leaves broader, or curled. June, July. Greece. 1548. A.

7. L. Alpinum. *Alpine Pepper Wort.* "Leaves pinnate, entire, smooth; flower-stalk naked, ascending; petals larger than the calyx; pouch lanceolate, pointed ;" stems very short, clothed with alternate leaves; flowers in a corymbose cluster, milk-white; petals roundish; leaves thick, dark green, with the flavour of the last species. April to June. The Alps. 1775.

8. L. Virginicum. *Virginian Pepper Wort.* "Flowers with two or three stamens, and four petals; stem leaves lanceolate, linear, serrate, wing cleft, lower ones pinnate ;" stem round, whitish green, a foot and half high, branched on all sides; flowers in clusters, small, white: its leaves are eaten as a salad herb in the West Indies. June, July. Jamaica. 1713. A.

All the plants of this genus have a pungent biting taste. Garden-cress has been cultivated time out of mind, for the use of its young leaves in an early salad;

some of the other species nearly answer the same purpose. Our English species are four, but are usually considered as weeds. . . .

XIII. *THLAS'PI*, from θλαστος, to bruise or beat; from the pounded appearance of the seeds. Nat. ord. *Linn.* *Siliquosae.* *Juss.* *Cruciferae.* 14 Species.

1. *T. Arven'se.* *Penny Cress, Smooth Mithridate Mustard.* " Pouch orbicular, flattened, entire at the base; leaves oblong, toothed, smooth;" leaves clasping the stem with their arrow-shaped base, edges wavy, toothed; flowers numerous, small, white; plant with a garlick flavour. July. Britain. A.

2. *T. Saxa'tile.* *Rock Mithridate Mustard.* " Pouch nearly orbicular, concave above, convex below; stems mostly simple, woody; leaves linear, lanceolate, fleshy, obtuse," scattered; flowers small, pink, numerous, in dense terminal corymbs; pouch tinged with pink. July. South of Europe. 1759. A.

3. *T. Allia'ceum.* *Garlick Bastard Cress.* " Pouch nearly obovate, tumid with a narrow border; leaves oblong, obtuse, smooth, somewhat toothed;" root leaves many, on long stalks; stems few, six inches high, ending in clusters as long as themselves; flowers small, white; the plant like the first species, with a smell of garlick. May to July. South of Europe. 1714. A.

4. *T. Ceratocarpon.* *Horned Shepherd's Purse, or Siberian Bastard Cress.* " Very smooth; pouch

obovate, tumid, with a terminal double horn-like compressed border; leaves lanceolate, somewhat toothed, arrow-shaped at the base;" stem solitary, erect, leafy, simple; flowers numerous, white, very small; pouches composing a long cluster. July. Siberia.

1779. A.

5. *T. Montanum*. *Mountain Bastard Cress*. "Pouch inversely heart-shaped; leaves smooth, nearly entire, radical ones obovate, stalked, the rest sessile, clasping the stem; petals thrice as long as the calyx;" stems simple, a span high; flowers in solitary terminal corymbs, numerous, large, white, handsome; calyx purplish. July. Austria. P.

These plants are rarely to be found, unless in curious gardens. The seeds of the first species are said to produce twice as much oil as linseed; they have been cultivated as well as those of another English species, *T. Campestre*, for that purpose; they are, however, of an unpleasant garlic flavour, and nearly approaching to the acrimony of mustard seed. "They make an ingredient," says Sir J. E. Smith, "in that nauseous opprobrium of medicine, the Mithridate Confection." The rest of our English species are considered as weeds.

XIV. *ISA'TIS*, the *σατίς* of Dioscorides; but its derivation is totally unknown. Nat. ord. *Linn. Siliquosæ. Juss. Cruciferæ*. 4 Species.

1. *I. Tinctoria*. *Dyer's Woad*. "Root leaves crenate; stem leaves arrow-shaped; pouch oblong, smooth;" root biennial; stem erect, branched; leaves

alternate, somewhat succulent; calyx and corolla yellow; seed vessels dark brown; stem and leaves besprinkled with a few hairs. May to July. Britain. B.

2. I. Alep'pica. *Oriental Woad*, "Pouch linear, oblong, downy, fringed;" root leaves narrow, spear-shaped; stem and the stem leaves smaller than the last, not so much branching; pouch narrower; flowers white. June, July, The Levant. 1739. A.

The leaves of Woad are much used by dyers, for affording a fine blue; it is also the basis of black, and many other colours. It is doubted whether it be truly indigenous, or has become naturalized by frequent culture; yet if it be the plant which Pliny says the ancient Britons painted their bodies with, it must be a native; some, however, are of opinion that Weld, *Reseda luteola*, was resorted to for that purpose.

xv. *BISCUTELLA*, formed of *bis*, twice, and the diminutive of *scutum*, a shield; the pouch resembling a double shield. Nat. ord. *Linn.* *Siliquosæ*. *Juss.* *Cruciferae*. 10 Species.

1. B. Auricula'ta. *Ear-podded Buckler Mustard*. "Calyx gibbous on each side; pouch running into the style;" stems from one to two feet high, dividing into several branches; flowers in loose panicles, of a pale yellow; glands of the nectary very large. June, July. France. 1683. A.

2. B. A'pula. *Spear-leaved Buckler Mustard*.

" Pouch rugged; leaves lanceolate, sessile, serrate;" whole plant rough with scattered hairs; stem branching, two feet high; at each joint an oblong indented leaf; flowers pale yellow, in a close spike; styles short. June, July. Italy. 1710. A.

3. B. Læviga'ta. *Smooth-podded Buckler Mustard.* " Pouch smooth; leaves lanceolate, serrate;" stem a foot high, nearly leafless, smooth, forming a branched corymb near the top; flowers in a kind of umbel; corolla and calyx both yellow. June, July. Austria. 1777. P.

These plants having no great beauty to recommend them, are preserved only in the gardens of the curious.

XVI. ANASTATICA, formed from *anastatixos*, re-suscitating; from the quality of reviving in water. Nat. ord. *Linn.* Siliquosæ. *Juss.* Cruciferæ. 1 Species.

1. A. Hierochun'tica. *Common Anastatica, or Rose of Jericho.* Stems woody, six inches high, dividing into many irregular branches; leaves obtuse, fleshy, glaucous; flowers in short spikes, white, small, succeeded by short prickly pods. If this plant be taken up before it is withered, and kept in a dry place, it may be long preserved; and, after many years, if the root be placed in water, in a few hours the buds of flowers will swell open, and appear as if newly taken out of the ground. June to August. The Levant. 1597. P.

Order Siliquosa.

XVII. RA'PHANUS, from $\rho\alpha$, quickly, and $\phi\alpha\nu\mu\alpha$, to appear; on account of the quickness of its growth. Nat. ord. *Linn.* *Siliquosæ.* *Juss.* *Cruciferæ.* 8 Species.

1. R. *Sati'vus*. *Common Garden Radish.* "Leaves lyrate; pod roundish, tumid, two celled;" leaves notched, rough; stem branched; flowers purple, in corymbose clusters; pods erect, juicy, pale, glaucous, smooth, slightly scored, tipped with an awl-shaped beak; the root varies from the common spindle-shape to round; and the colour from white, pale red, or dark red, to purplish black: gratefully pungent, mixed with a watery coolness. May, June. China. 1548. A.

2. R. *Tenel'lus*. *Slender Purple Radish.* "Leaves smooth, oblong, toothed, the lowermost wing cleft; pod awl-shaped, jointed, smooth, two celled;" stem scarcely branched, leafy; flowers small, purple; beak of the pod long and slender. July. Siberia. 1730. A.

The Wild Radish, *R. Raphanistrum*, is a troublesome weed in corn fields, throughout Europe.

XVIII. ERY'SIMUM, from $\epsilon\rho\nu\omega$, to draw; on account of its exhausting quality: this etymology is, however, uncertain. Nat. ord. *Linn.* *Siliquosæ.* *Juss.* *Cruciferæ.* 14 Species.

1. E. *Cheirantho'ides*. *Treacle Hedge Mustard, or Wormseed.* "Leaves lanceolate, entire, or tooth-

ed; pods erect; flower-stalks spreading," resembling Wall Flower in habit and leaves, but the small flowers and square pods at once distinguish it; seeds yellowish brown, intensely bitter; they are used medicinally to destroy worms. July, August. Britain. A.

2. E. Allia'ria. *Garlick Hedge Mustard, Jack in the Hedge, Sauce Alone.* "Leaves heart-shaped, stalked, toothed, cut;" plant smooth, of a garlick scent, when bruised; leaves alternate; flowers in a corymbus, white. May, Britain. P.

3. E. Barba'rea. *Bitter Winter Cress, Yellow Rocket.* "Lower leaves lyrate, terminal lobe round, upper leaves obovate, toothed;" stem deeply furrowed; leaves half stem-clasping; flowers of a full yellow; numerous in gardens, often double. May to August. Britain. P.

4. E. Præ'cox. *Early Winter Cress, American or French Cress.* "Lower leaves lyrate, upper leaves wing-cleft, divisions linear, oblong, entire," sometimes confounded with the last; flowers smaller; pods much longer: a pungent herb used in salads. April to October. Britain. P.

XIX. CHEIRAN'THUS, from the Arabic *keiri*, altered by Linnæus into a name with a Greek form, as though from *χειρ*, a hand, and *ἄνθετος*, a flower. Nat. ord. Linn. Siliquosæ. Juss. Cruciferae. 34 Species.

1. C. Erysimo'ides. *Wild Stock.* "Leaves lanceolate, naked, toothed; stem upright, simple; pods

four cornered ;" stem from a span to a foot high, purplish at bottom ; calyx green ; petals notched ; flowers yellow, scentless, in loose spikes ; style none. May to July. South of Europe. 1597. B.

2. C. Alpi'nus. *Alpine Stock, or Wall Flower.* "Leaves linear, entire, somewhat downy ;" stem branching, erect, angular ; leaves sometimes toothed, deciduous when old ; flowers sulphur-coloured, large, with little or no smell ; racemes very long. May to July. The Alps. 1731. P.

3. C. Che'i'ri. *Common Wall Flower.* "Leaves lanceolate, acute, smooth, entire ; branches angular ; stem shrubby," a foot and a half high ; leaves scattered, rather narrow ; flowers yellow ; calyx with a tinge of brown or violet ; seeds with a membranous edge ; flowers single or double, larger or smaller, pale or deep yellow, rusty or bloody spotted, of a delightful fragrance. April to July. South of Europe. 1573. S.

4. C. Fruticulo'sus. *Wild Wall Flower.* "Leaves lanceolate, acute, greyish underneath ; pubescent, simple, pressed close down ; stem shrubby ; branches angular ;" leaves crowded, stalked, acute, lower ones somewhat serrate ; flowers yellow, sweet scented ; calyx purplish ; seeds without a membranous edge ; it differs from the last in its acuter leaves ; petals smaller, not rusty or blood-coloured. May, June. Britain. S.

5. C. Inca'rus. *Queen's Stock Gilliflower.* "Leaves

lanceolate, entire, obtuse, hoary; pods lopped at the end, compressed; stem somewhat shrubby," branched; branches cylindrical, straight, hoary; leaves scattered, long, soft, clothed with a short down; flowers bright or pale red, variegated or pure white, often double, sweet scented. Its varieties are, 1. *Brompton Stock*, with leaves waved, stem undivided. 2. *White Stock Gilliflower*, much branched on every side. 3. *White Wall Flower*, leaves narrow, thick; flowers in loose spikes, very fragrant. May to November. England. P.

6. C. An'nuus. *Ten Weeks' Stock*. "Leaves lanceolate, somewhat toothed, obtuse, hoary; pods cylindric, acute at the tip; stem herbaceous," nearly allied to the last; stem round, straight, branched near the top; leaves long, narrowed towards the base; flowers large, red, purple or white, stalked, in terminal bunches; petals a little notched. June to August. South of Europe. 1731. A.

7. C. Fenestra'lis. *Window Stock*. "Leaves crowded, in heads, recurved, waved, obovate, hoary; stem undivided," six inches high, shrubby; leaves broadish; flowers purple, glittering, smaller than the last species, very sweet in the evening. July, August. Native country unknown. 1759. B. Gr. Ho.

8. C. Sinua'tus. *Prickly podded Stock*. "Leaves downy, obtuse, sinuated, those on the branches entire; pods prickly;" whole plant hoary; stem branched, spreading, round; leaves alternate, a little

succulent, oblong; flowers lilac or purple, fragrant only in the evening; calyx compressed, purplish. May to August. England. B.

9. C. *Tricuspida'tus*. *Three-forked Stock*. "Leaves lyre-shaped; pods three toothed at the tip;" stems declining, whitish, somewhat branched; leaves deeply sinuate at the edge, hoary; flowers purple-violet, in a short terminal bunch. July. Barbary. 1739. A.

10. C. *Parviflo'rus*. *Small flowered Stock*. "Leaves lanceolate, sinuate, toothed; pods sessile, horizontal, distant, forked at the tip;" stem erect, branched; leaves green, pubescent, with star-like hairs; flowers small, pale violet, in a very long raceme; pods two inches long, terminated by two long awns. July, August. Morocco. 1799. A.

11. C. *Mari'timus*. *Dwarf Annual Stock*. "Leaves obovate, obtuse, naked, roughish; stem diffuse, rough," much branched, a span high; leaves somewhat reflexed at the tip, green, rather rigid, on long stalks; flowers red, changing to blueish purple, in a terminal raceme; calyx close, even; anthers in the throat of the flower. This is improperly called *Virginia Stock*. C. *Chius*, of Linnæus, seems to be the same plant. May, June. South of Europe. 1713. A.

12. C. *Litto'reus*. *Small Sea Stock*. "Leaves lanceolate, somewhat toothed, downy and fleshy; petals notched; pods downy;" stem alternately branched, hoary; flowers in terminal racemes, pur-

ple, white at the base, stalked. June to November.
South of Europe: 1683. A.

13. E. Quadran'gulus. *Sessile flowered Stock.*
"Leaves linear, quite entire; pods sessile, oblong,
four-cornered, terminated by a long style;" stem sim-
ple, sometimes with a few branches at top; leaves
scattered, long, narrow, recurved, a little glaucous;
flowers pale yellow, in long spike-like racemes; pe-
tals obtuse; pods thick, hairy. June, July. Siberia.

1794. P.

The Wall Flower and Stock Gilliflower have been fa-
vourites of long standing in the English Garden. The
latter name is not a corruption of July Flower, as sup-
posed by many, but is derived from the French *Girofle*,
and was applied in former times to the present species,
and also to the Clove Pink: distinguishing them, how-
ever, as the Stock Gilliflower and the Clove Gilliflower;
both having the spicy odour of the Clove Tree, *Caryo-*
phyllus.

XX. HES'PERIS, from *εσπερος*, the evening; these
flowers smelling sweet at night. Nat. ord. Linn.
Siliquose. Juss. Cruciferæ. 10 Species.

1. H. Tris'tis. *Night Smelling Rocket.* "Stem
hispid, branched and spreading," about two feet
high, erect; leaves scattered, on short stalks, ovate,
slightly waved, or toothed, hairy; flowers in loose
panicles at top of the stalk, of a dull greenish hue,
smelling sweet at night, the odour somewhat resem-

bling that of a bergamot pear. April to June. Austria. 1629. B.

2. H. Matronalis. *Garden Rocket, or Dame's Violet.* "Stem simple, upright; leaves ovate, lanceolate, finely toothed;" stem two to three feet high; leaves sessile; whole plant with short hairs; flowers in a terminal cluster, numerous, pale purple or white, often double, exhaling in the evening only a sweet perfume. H. Inodora of Linnaeus seems to be the same plant. May to August. England. P.

3. H. Africa'na. *African Rocket.* "Stem very much branched and diffused; leaves lanceolate, stalked, sharply toothed, rugged; pods sessile;" whole plant rough with three-barbed hairs; flowers flesh-coloured, with narrow petals, blunt, in loose terminal panicles. June, July. Africa. 1747. A.

4. H. Ver'na. *Early flowering Rocket.* "Stem upright, branched; leaves heart-shaped, stem clasping; serrate, woolly;" lower ones spreading on the ground; flowers in loose panicles at the end of the branches, of a lively purple, sometimes white. June. South of France. 1710. A.

xxi. ARABIS, from Arabia; some of the species being abundant in that country. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ. 21 Species.

1. A. Alpi'na. *Alpine Wall Cress.* "Leaves stem-clasping, toothed;" root creeping, from which proceed many leaves, collected into heads, and spread-

ing circularly, oblong, whitish; stems a foot high, with alternate leaves; flowers white, in bunches near the top. March, April. The Alps. 1596. P.

2. A. Cæru'lea. *Blue Wall Cress.* "Leaves obovate, smooth, fringed, toothed near the tip; stem with two or three leaves; raceme drooping;" leaves thickish; flowers nodding, blue. June, July. Switzerland. 1793. P.

3. A. Bellidifo'lia. *Daisey-leaved Water Cress.* "Leaves somewhat toothed, smooth, those of the root egg wedge-shaped, of the stem oblong, sessile;" stems erect, several, lengthened out at top into a long raceme; flowers corymbose, inodorous, white; root leaves in tufts; pods upright. A. Pumila seems to be a dwarf variety. May, June. 1773. P.

4. A. His'pida. *Rough Wall Cress.* "Leaves wedge-shaped, sub-lyrate, hispid; stem leaves half stem-clasping, lanceolate; pods stiff, two edged;" stems many, six inches high; root leaves many; flowers white, large, in racemes. May to July. Britain. P.

5. A. Thalia'na. *Common Wall Cress.* "Leaves toothed, hairy, radical ones oblong; stamens equaling the petals; pods upright;" stem upright, branched, round, crooked, hairy, little branches drooping; petals white, entire, obtuse; growing on walls. April, May. Britain. A.

6. A. Pen'dula. *Pendulous Wall Cress.* "Leaves stem clasping; pods two edged, linear; calyxes

hairy;" stem a foot high, rough, with scattered hairs; leaves rough; flowers white; pods smooth, nodding. May, June. Siberia. 1759. A.

7. A. Turritis. *Tower Wall Cress.* "Leaves stem-clasping; pods very long, bending down, flat, linear; calyxes somewhat wrinkled;" stem from one to two feet high, upright, downy; leaves hairy on both sides; flowers upright, white or yellowish, on short stalks: a plant differing little from the last, growing on walls. May. Britain. B.

The first species is most known in gardens, and multiplies fast by its creeping root; it flowers early, and makes a pleasing appearance in the Spring, thriving even in the coldest and most neglected situations.

XXII. BRAS'SICA, from *βραστον*, to boil; from its use as a pot herb. Nat. ord. *Linn.* Siliquosæ. *Juss.* Cruciferae. 24 Species.

1. B. Na'pus. *Rape, Navew, or Coleseed.* "The root a continuation of the stem, spindle-form; leaves smooth, upper ones heart lance-shaped, embracing the stem, lower ones lyrate, toothed;" calyx spreading, allied to *Sinapis*; stem somewhat branched, about two feet high; flowers yellow; calyx yellowish green. May. Britain. B.

2. B. Ra'pa. *Turnep.* "The root a continuation of the stem, orbicular, flattened, fleshy; radical leaves lyrate, rough, stem leaves entire, smooth;" stem

erect, branched, round, smooth ; flowers yellow ; calyx yellow ; pods round. April. England. B.

3. B. Oleracea. *Sea Colewort, or Cabbage.* "The root a continuation of the stem, cylindrical, fleshy ; all the leaves smooth, glaucous, waved, or lobed," often with a mixture of purple, lower ones egg-shaped, sitting, upper ones linear ; flowers large, lemon coloured, sometimes nearly white ; calyx pale yellow ; pods short, swelling ; seeds dusky purple. The varieties are numerous : 1. *White Common Cabbage*, leaves forming a head. 2. *Red Cabbage*, leaves forming a head. 3. *Savoy Cabbage*, leaves crisped, and forming a head. 4. *Borecole*, leaves crisped, but not forming a head. 5. *Cauliflower*, with an upright shortish stem ; leaves not cabbaging, but the flower-stalks forming a head. 6. *Broccoli, purple or white*, leaves light green, not cabbaging ; flower-stalks forming a head ; scarcely to be distinguished from Cauliflower. 7. *Turnep-rooted Cabbage*, with a globular root or stalk. April to June. England. B.

4. B. Chinensis. *Chinese Cabbage.* "Leaves oval, nearly entire ; floral leaves embracing the stem, lanceolate ; calyx longer than the claws of the petals ;" lower leaves large, resembling those of common Hound's Tongue, but smooth ; flowers yellow ; pods flattened. July. China. 1770. A.

5. B. Erucas'trum. *Runcinate-leaved Cabbage.* "Leaves runcinate ; stem hispid at the base ; pods

smooth ;" stems several, a little branched, slightly scored ; root leaves prostrate ; stem leaves alternate, one to each branch, glaucous, often with a few hairs ; flowers in a loose terminating raceme, yellow ; pods spreading. June to August. South of Europe. 1790. A.

6. B. *Eru'ca. Stripe flowered Cabbage, or Garden Rocket.* "Leaves lyrate ; stem hairy ; pods smooth ;" stem two feet high, angular, branched ; leaves green, stalked ; calyx erect ; claws of the petals erect, long, border broad ; pods on short stalks, pressed to the stem ; flowers lemon coloured, with purple veins. July. Switzerland. 1573. A.

7. B. *Campes'tris. Field Cabbage.* "Root and stem slender ; leaves heart-shaped, pointed ; stem clasping ; lower leaves lyrate, toothed, somewhat hairy ;" leaflets of the calyx a little spreading ; petals yellow or whitish ; pods erect, round, scored. B. *Orientalis* seems to be a variety of this, but neither of them is cultivated. June. Britain. A.

. *Eruca*, or *Garden Rocket*, was formerly much used as a salad herb, but has been long rejected on account of its ungrateful smell. B. *Napus* is cultivated in fields, particularly in the Isle of Ely, for the purpose of feeding cattle, and also for the sake of its seed, called *Rape* or *Coleseed*, from which an oil is extracted, useful for various purposes in manufactures ; the residue is a very efficacious manure. B. *Rapa*, or the Common *Turnep*, has numerous varieties, such as the purple topped, the green topped, the Dutch yellow, &c. one with a long

root, called the French Turnep, though not common here, is much esteemed in France for soups. The general use of Turneps for the table is well known; the tender tops boiled are frequently eaten in the spring, as greens with meat. The cultivation of Turneps, for the use of cattle, seems to have been introduced about a hundred and fifty years since, and for some time to have been principally confined to the eastern counties. *B. Oleracea*, which, by Ray, is supposed to be perennial, is the parent of all the numerous varieties of Cabbage which are cultivated for the table. Miller has divided them into three families. 1. Plants which grow without forming a head, such as, 1. *The Wild or Perennial Colewort*, which is the original species. 2. *The Green Colewort, or Dorsetshire Kale*, with a short stem, leaves smooth, of somewhat milder flavour: both these are in little estimation, as they are frequently tough and bitter; but they are sometimes sown to feed milch cattle in the spring, as they resist the severest cold. What the London gardeners usually now call Colewort, is young cabbages just beginning to form a head; sweeter and more delicate greens than the Colewort, but apt to perish in winter. 3. *Borecole or Curled Colewort*, with a tall stem and crisped leaves, either green or purple, sometimes very thick, and sometimes fringed: this is more esteemed than the Common Colewort, being equally hardy, and much more delicate in flavour. 4. *Siberian Borecole, or Scotch Kale*, has a strong stem, crowned by a large open head of broad, thick, cut, curly leaves: all these sorts require to be mellowed by frost. 5. *Turnep Cabbage* has its stem swelled like a large turnep, and crowned by a tuft of leaves: this globular part is sometimes sliced in soups, but unless used when quite young it is apt to be

rank. 6. *Turnep-rooted Cabbage*, nearly the same as the last; but the protuberant part, which is more of an oblong figure, descends into the ground, and is cultivated for the same agricultural uses as the Turnep, and resists the most intense frost. *Ruta Baga*, improperly called Swedish Turnep, scarcely differs from this, except in its smaller head of leaves and yellower root. II. Plants with leaves forming a head: 1. *Common White or Headed Cabbage*, with leaves oblong, smooth, entire, folding closely over each other till they form a large, compact, globular head, of various names, such as the Sugar-loaf, Battersea, Yorkshire, Drum-head, American, and innumerable others. They are cultivated chiefly for summer and autumn kitchen' use, and in fields for cattle during the winter. Some kinds will tolerably well resist the frost, whilst others are quite destroyed by it: sour krout is Cabbage sliced and undergoing fermentation, mixed with salt and a little vinegar, to some palates very pleasant, and of great anti-scorbutic virtues. 2. *Red Cabbage*, with a very hard compact head of smooth fleshy leaves of a dark red, esteemed as an excellent pickle, and for eating raw in a salad, as indeed is sometimes the white. 3. *Savoy Cabbage*, of roundish, crumpled, curled leaves, forming an oblong closely-cabbaged head. III. Plants with the flower stalks forming a head: 1. *Cauliflower*, with an upright shortish stem, crowned by an open head of oblong flat leaves, not cabbaging, but having a large clustered flower-head in the centre. 2. *Italian Cabbage, or Broccoli*, with an erect robust stem, and with light green leaves surrounding a clustered flower-head in the centre, either white or purple, not so large as Cauliflower, in use from Christmas to April. It is obvious that this genus, *Brassica*,

affords some of the best and most useful esculent vegetables of the kitchen garden. Cabbage has been cultivated from the remotest antiquity. All the above enumerated varieties may be continued by the plants being kept entirely separated, but if they are suffered to run to seed together the produce will be very uncertain.

xxiii. TURRITIS, from *turris*, a tower, in allusion to its pyramidal form of growth. Nat. ord. *Linn.* Siliquosæ. *Juss.* Cruciferæ. 8 Species.

1. *T. Gla'bra*. *Smooth Tower Mustard*. "Radical leaves toothed, hairy, the rest entire, clasping the stem, smooth;" stem simple, wand-like, covered with leaves, arrow-shaped at the base; flowers cream-coloured, corymbose, numerous; pods in a dense cluster, long, slender, smooth, erect, full of seeds, which were formerly an article of the *Materia Medica*, esteemed hot, dry, and stimulating. May, June. England. A.

2. *T. Hirsu'ta*. *Hairy Tower Mustard*. "Leaves all rough, toothed in the middle; stem hairy; hairs simple, spreading; branches straight, erect; pod slightly quadrangular;" stems several, one generally stronger than the rest, clothed with bluntnish leaves; flowers small, white, numerous; pods forming a long, close, erect cluster. May to July. Britain. P.

xxiv. DENTA'RIA, *dens*, a tooth, from the toothed structure of the root. Nat. ord. *Linn.* Siliquosæ. *Juss.* Cruciferæ. 7 Species.

1. D. Enneaphyl'la. *Nine-leaved Tooth Wort.* "Leaves three together, ternate, serrate, without glands between the leaflets," which are lanceolate, smooth; flowers from three stalks, forming a panicle, yellowish red; calyx pale green. May, June. Austria. 1656. B.

2. D. Pentaphyl'la. *Five-leaved Tooth Wort.* "Leaves digitate; leaflets five;" stem strong, a foot and a half high, with a leaf at each joint; flowers in loose spikes at the top of the stalks, small, blush-colour; pods long and taper. May, June. Switzerland. 1656. P.

3. D. Pinna'ta. *Seven-leaved Tooth Wort.* "All the leaves pinnate, the lower with seven, the upper with five leaflets, lanceolate, pointed, acutely serrate;" flowers large, of a light rose-colour. May, June. Switzerland. 1683. P.

4. D. Bulbi'fera. *Bulbiferous Tooth Wort.* "Lower leaves pinnate, upper ones simple;" stem simple; leaflets lanceolate, serrate; corolla flesh-coloured; bulbs proceeding from the axils of the leaves, as in *Lilium Bulbiferum*; fruit commonly abortive. May. England. P.

xxv. RICO'TIA, supposed to be in honour of some obscure botanist, now quite unknown. Nat. ord. *Linn.* Siliquesæ. *Juss.* Cruciferæ. 1 Species.

1. R. Aegypti'aca. *Egyptian Ricotia.* Stem a foot high, smooth, branching; leaves unequally pin-

mate; leaflets some undivided, others three lobed, of a lucid green; flowers purple, on long stalks, in small loose clusters; pods drooping, sessile, which is the chief distinction from the genus *Lunaria*, which has a stalked pod. July. Egypt. 1757. A.

xxvi. CLEO'ME, from *κλειω*, to shut up.. Nat. ord. *Linn.* Putamineæ. *Juss.* Capparides. 23 Species.

1. *C. Viola'cea.* *Violet-coloured Cleome.* " Flowers hexandrous; leaves ternate and simple; leaflets lanceolate, linear, quite entire;" stem erect, sometimes crooked; branches diffuse; leaves on long stalks; flowers violet-coloured, solitary, in a loose spike; calyx leaves yellow, with purple tips; two upper petals of the corolla with yellow dots: whole plant downy, viscid. June, July. Portugal. 1776. A.

xxvii. CARDAMINE, diminutive of *καρδαμόν*, the Greek name of some sort of cress; and that from *κάρη*, the head, and *δαμάω*, to afflict, because it affects the head by its heat and acrimony. Nat. ord. *Linn.* Siliquosæ. *Juss.* Cruciferæ. 22 Species.

1. *C. Asarifo'lia.* *Asarabacca-leaved Ladies' Smock.* " Leaves simple, somewhat heart-shaped;" stem about six inches high; flowers white; pods long, bursting when ripe at the least touch: this plant has all the qualities of Scurvy Grass. July. Italy. 1710. P.

2. *C. Trifo'lia.* *Three-leaved Ladies' Smock.* " Leaves ternate, obtuse; stem almost naked;" stems

several, six or seven inches high; flowers white or reddish, in terminal clusters; pods oblong, swelled with the seeds. March, April. The Alps. 1629. P.

3. C. Praten'sis. *Ladies' Smock, Cuckow Flower.* "Leaves winged; radical leaflets roundish, those on the stem lanceolate;" stem a foot high, erect, simple; flowers large, purple or white, in a terminal corymb, becoming double by cultivation; anthers yellow. April, May. Britain. P.

4. C. Ama'ra. *Bitter Ladies' Smock.* "Leaves winged; root leaves roundish; stem leaves angularly toothed; stem striking root at the base; anthers violet-coloured;" leaves nearly smooth; flowers white or cream-coloured, by cultivation double. April, May. Britain. P.

The double varieties of the last two sorts make a pretty appearance in the garden; other species of the genus are rarely admitted: the leaves of some sorts, when young, are occasionally used in salads, as they have a pungent and somewhat aromatic flavour.

XXVIII. SINA'PIS, from σίνω, to hurt, and ὄφας, the eyes, because it makes the eyes water. Nat. ord. *Linn.* Siliquosæ. *Juss.* Cruciferæ. 10 Species.

1. S. Arven'sis. *Wild Mustard, or Charlock.* "Pods with many angles, rugged, longer than their two-edged beak; leaves ovate, somewhat lyrate;" stem round, hispid, with slightly deflexed bristles, tinged with red; leaves alternate, stalked, rough, un-

equally toothed; flowers in a terminal corymb of a bright yellow; seeds extremely pungent, known under the name of Durham Mustard. S. Orientalis is scarcely more than a variety of this with bristly pods. May to July. Britain. A.

2. S. Al'ba. *White Mustard.* "Pods bristly, rugged, shorter than their two-edged beak; leaves wing-cleft," irregularly toothed, and rough; flowers yellow; pods ribbed, with a very long sword-shaped beak; seeds large, globose, pale yellow, sometimes black. This is the species cultivated as a salad herb with Cresses and Radish for Spring use. June, July. Britain. A.

3. S. Ni'gra. *Common Mustard.* "Pods smooth, square, close pressed to the stem; upper leaves linear, lanceolate, entire, smooth;" stem much branched, spreading; leaves lobed and toothed, those of the stem smooth and pendulous; flowers small, numerous, bright yellow; seeds several, round, smooth, brown. May, June. Britain. A.

4. S. Chinensis. *Chinese Mustard.* "Pods smooth, slightly jointed, spreading; leaves lyrate or runcinate, somewhat hairy;" stem three feet high, scored, branched; root leaves large, stalked, wrinkled; flowers white or yellow, in long aggregate clusters. This plant is extensively cultivated in China. July. China: 1782. A.

6. S. Juncea. *Fine-leaved Mustard.* "Branches in bundles; upper leaves lanceolate, entire;" stem

erect, two feet high, smooth; root leaves wing-cleft at the base, unequally serrate; flowers yellow, in clusters. June, July. China. 1710. A.

6. *S. Læviga'ta.* *Smooth Mustard.* "Pods smooth, spreading; leaves lyrate, upper ones lanceolate; stem and leaves remarkably smooth;" flowers large, yellow. Spain and Portugal. 1769. B.

7. *S. Pubes'cens.* *Downy Mustard.* "Pods downy, erect, with a compressed beak; leaves lyrate, woolly;" stem perennial, shrubby; leaves obtuse; flowers yellow, with undivided petals. July. Sicily. 1789. P.

8. *S. Eruco'ides.* *Dwarf Mustard.* "Pods smooth, equal; leaves lyrate, oblong, smooth; stem smooth," eight or nine inches high, purplish, a little angular; leaves much jagged, yellowish green; flowers white, in loose spikes. June, July. South of Europe. 1736. A.

9. *S. Inca'na.* *Hoary-jointed Mustard.* "Pods with two joints, erect; leaves twice wing-cleft; segments linear;" stem branched, hispid; leaves on long stalks, lyrate, hairy and hoary; flowers small, yellow, in terminal axillary clusters. July. South of Europe. 1771. B.

The second species is well known as a salad herb, cultivated with Cresses and Radish for winter and spring use, it is always cut whilst in the seed-leaf and but a few days old. The third species produces the seed, which affords the common table Mustard, one of the most useful and

wholesome of stimulants both in cookery and medicine. The other species are cultivated merely for variety.

XXIX. SISYMBRIUM. Dioscorides has a plant called σισυμβρίον, supposed to be our Common Water Cress, but the meaning of the name is unknown. Nat. ord. Linn. Siliquosæ. Juss. Cruciferæ. 53 Species.

1. *S. Nastur'tium.* *Common Water Cress.* "Pods declining; leaves pinnate; leaflets roundish, heart-shaped;" stems branched, angular and leafy, floating, sending down long fibrous roots; flowers in corymbose tufts, numerous, white, or with a purple tinge; pods gibbous, recurved; leaves smooth, shining, dark green, often brownish; leaflets five or seven, the end and the upper ones largest. May to July. Britain. P.

2. *S. Pyrena'icum.* *Pyrenean Wild Rocket.* "Pods somewhat ovate; lower leaves lyrate, upper twice wing-cleft, clasping the stem; styles thread-like;" leaflets linear, acute, entire; flowers yellow. May, June. The Pyrenees. 1775. P.

3. *S. Sagitta'tum.* *Arrow-leaved Wild Rocket.* "Pubescent; pods cylindrical, declined; leaves obovate, toothed; root leaves spear-shaped; stem leaves arrow-shaped, stem-clasping;" whole plant clothed with soft down, somewhat stellated; flowers yellow, succeeded by long clusters of drooping downy pods. May, June. Siberia. 1780. P.

4. S. *Tenuifolium*. *Wall Wild Rocket.* "Pods erect, somewhat beaked; leaves smooth, wing-cleft, or twice wing-cleft, nearly entire, the uppermost undivided;" plant bushy, somewhat glaucous; leaves acute, variously sinuate and cleft; flowers large, lemon-coloured, of a strong rank scent. July to October. England. P.

5. S. *Altissimum*. *Tall Wild Rocket.* "Leaves runcinate, flaccid; leaflets nearly linear, quite entire; flower-stalks loose;" stems three or four feet high, branching out greatly on every side; flowers scattered, yellow; pods very long, filled with small yellowish seeds. August. Siberia. 1759. A.

6. S. *Polyceratum*. *Dandelion-leaved Wild Rocket.* "Pods axillary, aggregate, awl-shaped, nearly sessile; leaves wavy or toothed;" stems branched, decumbent, leafy, smooth; flowers small, white, axillary, two or three together; pods rather curved. July. France. 1633. A.

7. S. *Tanacetifolium*. *Tansey-leaved Wild Rocket.* "Leaves pinnate; leaflets lanceolate, cut or deeply serrate, hairy beneath; the outmost leaflets confluent;" stem two or three feet high, clothed with spreading leaves; flowers golden yellow, numerous, in terminal corymbs; pods obtuse, tapering at the base. July. Italy. 1731. P.

8. S. *Strictissimum*. *Spear-leaved Wild Rocket.* "Leaves ovate, lanceolate, toothed, downy, stalked; corymbs panicled; pods ascending;" stems a yard

high, clothed copiously with taper-pointed leaves; flowers abundant, showy, yellow, in a dense oblong panicle; pods slender, smooth, thread-shaped, two edged. June to August. Switzerland. 1658. P..

No British plant is in such popular request as a salad, as the Common Water Cress; the young leaves have a pleasantly warm pungent flavour, and, like Scurvy Grass, are supposed to purify the blood; though generally gathered from slow-flowing shallow streams, it is also cultivated for the supply of the London markets. The remaining species of this very numerous genus have commonly a pungent flavour, but are of little use or beauty, and consequently are rarely cultivated, unless in curious or botanical gardens. The genus itself, like many others of this fifteenth class, is somewhat perplexed and obscure; the authors of the Kew Catalogue have removed one-fourth of the species of the whole class from their old situations, arranging them under different genera already established, or forming them into new genera: for reasons given in the Preface of this work, the arrangement, as it stands in the last edition of the Species Plantarum of Linnaeus, edited by Willdenow, is preferred.

CLASS XVI.

MONADELPHIA.

Order Triandria.

I. **SISYRINCHIUM.** Style one; sheath of two or more leaves; calyx none; petals six, nearly equal, flat; style one; capsule of three cells, inferior.

II. **FERRARIA.** Style one; sheath two leaved; calyx none; petals six, waved and curled, the three outer ones broader; stigmas cowled; capsule of three cells, inferior.

Order Pentandria.

III. **PASSIFLORA.** Styles three; calyx in five deep coloured segments; petals of the corolla five, inserted into the calyx; nectary a complex radiating crown; berry stalked; seeds with a pulpy tunic.

IV. **ERODIUM.** Style one; calyx of five leaves; petals of the corolla five; nectariferous glands five; abortive filaments five; fruit beaked, of five aggregate capsules, each tipped with a long spiral awn, bearded on the inside.

Order Heptandria.

V. **PELARGONIUM.** Style one; calyx in five deep segments, the uppermost lengthened at the base into a nectariferous tube; petals of the corolla five, irregular, running down to the foot-stalk; filaments ten,

unequal, three of them abortive; fruit beaked, of five aggregate capsules, each tipped with a long spiral awn, bearded on the inside.

Order Decandria.

VI. GERANIUM. Style one; calyx of five leaves; petals of the corolla five; nectariferous glands five; fruit beaked; of five aggregate capsules, each tipped with a long recurved naked awn.

Order Polyandria.

VII. GORDONIA. Style one; calyx single, of five concave leaves; petals five; style columnar; stigma five cleft; capsule of five cells; seeds several, in two rows, winged.

VIII. STUARTIA. Styles five; calyx in five deep segments; petals five; styles five, cohering or separate; capsule superior, of five cells and five valves; seeds one or two in each cell, smooth.

IX. PALAVIA. Style one; calyx single, five cleft; corolla of five petals; style many cleft; capsule of numerous single seeded cells, clustered irregularly together.

X. SIDA. Style one, many cleft; calyx single, angular; petals five; capsules several, from one to three angled.

XI. GOSSYPIUM. Style one; calyx double, the outer three cleft; petals five; capsule with three or four cells; seeds enveloped in wool.

XII. LAVATERA. Styles many; calyx double, the outer three cleft; petals five; capsules numerous, ranged in a circle, single seeded.

XIII. MALVA. Styles many; calyx double, the outer of three leaves; petals five; capsules numerous, ranged in a circle, single seeded.

XIV. MALOPE. Styles many; calyx double, the outer of three leaves; petals five; capsules irregularly heaped together; single seeded.

XV. HIBISCUS. Style one; calyx double, the outer of many leaves or segments; petals five; stigmas five; capsule of five cells, with several seeds.

XVI. KITAIBELIA. Styles many; calyx double, the outer one seven or nine cleft; capsules single seeded, forming a roundish five lobed head.

XVII. ALTHEA. Styles many; calyx double, the outer one from six to nine cleft; petals five; capsules very numerous, ranged in a circle; one seeded.

XVIII. CAMELLIA. Style one; calyx many leaved, imbricated or tiled; the inner leaves larger; petals of the corolla five to seven.

CLASS XVI.

MONADELPHIA.

Order *Triandria*.

1. **SISYRIN'CHIUM**, from *συρίς*, a hog, and *ψυχός*, a snout; whether applicable to the shape of the flower or of the root, is not agreed. Nat. ord. *Linn.* Ensatae. *Juss.* Irides. 8 Species.

1. **S. An'ceps.** *Narrow-leaved Sisyrinchium.*
"Stalk two edged, winged, unbranched, nearly leafless; sheath unequal, longer than its four flowers; petals pointed; leaves sword-shaped;" plant of a grassy aspect; stalks about three inches high; from two to four flowered; flowers small, pale blue. June, July. North America. 1693. P.

2. **S. Bermudia'na.** *Iris-leaved Sisyrinchium.*
"Stalk two edged, branched, leafy; sheath shorter than its four flowers; petals pointed; leaves sword-shaped;" plant a foot high, with a compressed stem and leaves; flowers from four to nine, an inch wide, dark blue, pale green in the centre, thrice as large as the last. May to July. The Bermudas. 1732. P. Gr. Ho.

3. **S. Stria'tum.** *Streak flowered Sisyrinchium.*
"Stem much branched, leafy, compressed, winged, many flowered; flowers in bundles, with a simple sheath to each;" stems two or three feet high; leaves

glaucous, edged with purple, tinged with yellow at the base; flowers numerous, inodorous, pale yellow, streaked with purple, fainter within. May to August. Mexico. 1788. P.

II. FERRARIA, from John Baptist Ferrari, a learned Jesuit, who published at Rome a volume on the culture of flowers; 1633. Nat. ord. *Linn. Ensatae. Juss. Irides.* 4 Species.

1. F. Tigri'dia, or Pavo'nia. *Mexican Tiger Flower.* "Stem simple, flexuose; leaves equitant, sword-shaped, nerved; petals flat;" root an ovate bulb, eatable when roasted, tasting like a chesnut; stem two or three feet high, somewhat branched, one flowered; leaves several; flower inodorous, three inches broad, splendidly variegated with scarlet, crimson, purple, and yellow. May to August. Mexico. 1798. P.

Order Pentandria.

III. PASSIFLO'RA; because the instruments of Christ's Passion were thought to be represented in the parts of fructification. Nat. ord. *Linn. Juss. Cucurbitaceæ.* 46 Species.

1. P. Cæru'lea. *Common Blue Passion Flower.* "Leaves deeply palmate, in five entire smooth segments;" whole plant smooth, of a rather glaucous hue; stems requiring support; stipules half heart-shaped, wavy; floral leaves ovate; calyx spreading, nearly flat, its segments elliptic, oblong, like the pé-

tals, and of the same white or pale greenish hue; rays of the nectary spreading, shorter than the petals, purple at the base, white in the middle, blue at the end; each flower lasting but a day; fruit orange-coloured, the size and shape of a Mogul Plum. June to October. Brazil. 1699. S.

All the species of this beautiful and numerous genus are natives of America, and require the protection of the Green-house or Stove, except the above, which is somewhat tender. The flower was originally named *Flos Passionis*, till altered by Linnæus. The five stamens have been compared to the five wounds of Christ; the three styles to the nails by which he was fixed to the cross; the column which elevates the germ to the cross itself, or to the pillar to which he was bound; and the rays of the nectary to the crown of thorns.

IV. ERO'DIUM, from *ερωδιος*, a heron; the fruit resembling the head and beak of that bird. Nat. ord. *Linn. Gruinales. Juss. Gerania.* 34 Species.

* *Leaves compound, pinnate, and wing-cleft.*

1. E. Petræ'um. *Rock Crane's Bill.* "Stemless; stalks many flowered; leaves pinnate, smooth; leaflets wing-cleft, with lanceolate, linear segments; leaf-stalk toothed between the divisions; petals blunt; twice as long as the calyx;" leaves heaped about the root, hoary; calyxes large, scored; corolla large, blue, purple, or red; plant strong smelling. June, July. South of Europe. 1640. P.

2. E. Cico'num. *Long-beaked Crane's Bill.*
 " Stalks many flowered; leaves pinnate; leaflets wing-cleft and toothed; leaf-stalk toothed between the divisions; petals oblong, two of them notched; stem ascending;" flowers pale blue; beak of the seed long. June, July. South of Europe. 1711. A.

3. E. Cicutarium. *Hemlock-leaved Crane's Bill.*
 " Stalks many flowered; leaves pinnate; leaflets sessile, wing-cleft, cut; stem hairy, prostrate;" petals white or rose-coloured, with two or three green spots; plant foetid; leaves finely divided. April to September. Britain. A.

4. E. Roma'num. *Roman Crane's Bill.* " Stemless; stalks many flowered; leaves pinnate; leaflets ovate, wing-cleft;" petals not spotted at the base; lower flower-stalks very long; flowers in small bunches; a plant little differing from the last species. May, June. Rome. 1724. A.

5. E. Moscha'tum. *Musky Crane's Bill.* " Stalks many flowered; leaves pinnate; leaflets slightly stalked, oblong, cut, toothed; petals equalling the stamens; stems procumbent;" plant of a musky odour, with glutinous hairs; corolla red or purple. May to July. England. A.

** *Leaves ternate and three-parted.*

6. E. Gru'i'num. *Broad-leaved Cretan Crane's Bill.*
 " Stalks somewhat many flowered; leaves ternate,

pointed, cut, toothed; the middle leaflet wing-cleft and stalked; stem bristly;" leaves broad; flowers on long stalks; petals entire, blue; beak of the fruit remarkably large. June, July. Candia. 1596. A..

7. E. Malacoïdes. *Mallow-leaved Crane's Bill.* " Stalks many flowered; leaves heart-shaped, slightly lobed, obtuse, toothed, smooth; stem and leaf-stalks hairy;" branches spreading a foot and a half each way; flowers five to seven on a stalk, bright red; seeds with a long beak. E. Chium seems to be a variety of this, with the upper leaves more divided. May to July. South of Europe. 1596. A.

8. E. Mari'timum. *Sea Crane's Bill.* " Flower-stalks barely three flowered; leaves heart-shaped, cut, crenate, rough; stems depressed;" leaves with long stalks, variously cut and jagged; flowers often solitary, pale red, small. May to September. England. P.

9. E. Chamædryoi'des. *Dwarf Crane's Bill.* " Nearly stemless; stalks one flowered; leaves heart-shaped, obtuse, crenate," numerous, shining, stalked; petals white, entire, with woolly claws, between which are green fleshy glands. This species is known to nursery men by the name of E. Reichardi. April to September. Minorca. 1783. P.

This genus stood formerly as the first division of Geranium; it has five fertile filaments, and five barren ones. The above are all the species that will flourish in the open

air: our native species are wonderfully improved in luxuriance by garden cultivation.

Order Heptandria.

v. **PELARGONIUM**, from *πελαργος*, a stork; in allusion to the long beak of the fruit. Nat. ord. *Linn.* Gruinales. *Juss.* Gerania. 120 Species.

1. P. Triste. *Night-scented Crane's Bill.* " Stem very short; umbels simple; leaves hairy, pinnate; leaflets doubly wing-cleft, in oblong acute segments; root of many jointed knobs;" flowers yellowish, marked with purple spots, smelling very sweet after sun-set; leaves almost as finely divided as those of Carrot. May to September. The Cape. 1632. P. Gr. Ho.

2. P. Odoratis'simum. *Sweet-scented Crane's Bill.* " Umbel of about five flowers; leaves roundish, heart-shaped, crenate, very shortly downy;" stem somewhat shrubby, fleshy; leaves soft, smelling like aniseed; flowers whitish, small. May to August. The Cape. 1724. S. Gr. Ho.

3. P. Tri'color. *Three-coloured Crane's Bill.* " Umbels three flowered; leaves oblong, bluntish, hoary, cut, and somewhat wing-cleft, obscurely three lobed;" petals of the corolla roundish, three lowermost white, sometimes a little striped with red, the two uppermost of a rich and deep blood red, darkly veined with a velvet-like lustre, their base nearly black, beset

with shining glandular points. February to November. The Cape. 1791. S. Gr. Ho.

4. P. Zona'le. *Horse-shoe Crane's Bill.* "Umbels many flowered; leaves heart-shaped, round, slightly lobed, toothed, roughish, marked with a concentric zone;" flowers copious, rose-coloured; leaves with a dark cross stripe, varying in breadth and intensity. Of this species the varieties are numerous. April to November. The Cape. 1710. S. Gr. Ho.

5. P. Inqui'nans. *Scarlet Crane's Bill.* "Umbels many flowered; leaves roundish, kidney-shaped, slightly lobed, crenate, downy, viscid;" stems sometimes six or eight feet high; flowers copious, of a vivid scarlet; leaves staining the fingers when rubbed with a somewhat greasy red moisture. May to September. The Cape. 1714. S. Gr. Ho.

6. P. Pelta'tum. *Ivy-leaved Crane's Bill.* "Umbels of few flowers; leaves five lobed, entire, fleshy, smooth, more or less peltate," dark, shining; branches angular; flowers rose-coloured, handsome. June to August. The Cape. 1701. S. Gr. Ho.

7. P. Cuculla'tum. *Hooded or Hollow-leaved Crane's Bill.* "Umbels many flowered; leaves kidney-shaped, hooded, slightly scolloped, finely toothed;" a large and showy species well known in gardens, of a grey hoary aspect; leaves rounded, funnel-like; umbels hairy, numerous; flowers large, purple; the two upper petals finely pencilled, and having a

dark spot. April to August. The Cape. 1890. S. Gr. Ho.

8. P. Capitatum. *Rose-scented Crane's Bill.* "Umbels of many flowers, crowded, in heads; leaves heart-shaped, lobed, wavy, crenate, soft and downy; stem diffuse; nectary very short;" flowers pale purple, with dark veins; partial stalks very short; leaves three lobed, when rubbed they have an odour like dried roses. April to August. The Cape. 1890. S. Gr. Ho.

This genus stood formerly as the second division of Geranium; its chief distinction is the tubular nectary and the three abortive filaments. All the species are natives of Africa, and require the protection of the green-house: their number is very large, and in many catalogues it has been greatly extended by the admission of hybrid or mule varieties, which are continually starting up in extensive collections, and suddenly disappearing. The whole tribe is in universal favour, the standing ornaments of every conservatory. The above described have been the longest known in England, and still retain their attraction: they are all of a tender habit, soon nipped and destroyed by frost.

Order Decandria.

VI. GERANIUM, from γεράνιος, a crane, the beak of the fruit resembling the bill of that bird. Nat. ord. Linn. Gruinales. Juss. Gerania. 39 Species.

1. G. Sibiricum. *Siberian Crane's Bill.* "Stalks one flowered; leaves five parted, acute; leaflets wing-

cleft;" stem herbaceous, repeatedly forked; petals pale purplish, not streaked, scarcely longer than the calyx. June, July. Siberia. 1758. P.

2. G. Sangui'neum. *Bloody Crane's Bill.* "Stalks one flowered; leaves five parted, each division three cleft, roundish;" stems lax, spreading, swelled at the joint; leaves opposite: whole plant set with white spreading hairs, turning reddish after flowering; flowers pale red, with deeper veins, hairy at the base. A variety called the Lancashire Crane's Bill, with pale flowers marked with purple, is frequently cultivated. June to September. England. P.

3. G. Tubero'sum. *Tuberous-rooted Italian Crane's Bill.* "Stalks two flowered; leaves many parted; segments linear, wing-cleft, obtuse;" plant low, scarcely branched; flowers abundant, terminating; calyx awned. May to August. Italy. 1596. P.

4. G. Macrorhi'zum. *Long-rooted Crane's Bill.* "Stalks two flowered; calyx inflated; petals entire; pistil very long; stem forked; leaves five lobed, toothed;" stem short, knotted; leaves soft, downy, of a pleasant cedar-like flavour when rubbed; petals large, round, red, or bright purple. May, June. Italy. 1576. P.

5. G. Reflex'um. *Reflex-flowered Crane's Bill.* "Stalk two flowered, alternate with the leaves; petals reflexed, jagged, the length of the calyx, which is awnless;" stem a foot high, forked, downy; upper leaves alternate, five lobed, wrinkled, not spotted;

petals red, gaping at the base; anthers yellow, with a brown edge. May to July. Italy. 1758. P.

6. G. Li'vidum. *Wrinkled-leaved Crane's Bill.* "Leaves half seven lobed, gashed; calyx simple, hairy; petals flat, somewhat waved," pale blue, with a livid centre, plaited and serrate at the edge. June, July. Switzerland. 1775. P.

7. G. Nodo'sum. *Knotty Crane's Bill.* "Stalks two flowered; petals notched; stem leaves three lobed, serrate, glossy beneath; lobes oblong, acuminate; stem square," with knots like little bulbs at the origin of the branches; calyx streaked, awned; corolla purple. May to October. England. P.

8. G. Striatum. *Streaked Crane's Bill.* "Stalks two flowered; petals two lobed, netted with veins; upper leaves with three ovate, acute, toothed lobes; stem round; capsules nearly smooth, woolly at the base;" stems branching; leaves light green; petals obtuse, dull white, with purple veins. May to October. Italy. 1629. P.

9. G. Angulatum. *Angular-stalked Crane's Bill.* "Stalks two flowered; petals notched, netted with veins; upper leaves five lobed, toothed, radical ones seven lobed," cut, hairy; stem erect, somewhat angular; blossoms flesh-coloured, with veins of a deeper red. May, June. Native country unknown. 1789. P.

10. G. Phæ'um. *Dusky Crane's Bill.* "Flower stalks solitary, two flowered, opposite to the leaves;

calyx slightly awned; stem erect; petals waved;" stems woolly below; joints tinged with red; leaves soft, lobed; lobes serrate; petals dark purple, shining; claws white, marked with five lines, woolly; anthers whitish. April to June. England. P.

11. *G. Sylva'ticum*. *Wood Crane's Bill*. "Stalks two flowered; leaves somewhat peltate, five lobed, gash serrate; stem erect; petals notched;" stems two or three feet high, much branched; leaves pubescent, veined beneath; petals large, purple, or variegated with white, a little woolly at the base. May, June. Britain. P.

12. *G. Praten'se*. *Meadow Crane's Bill*. "Stalks two flowered; leaves somewhat peltate, many parted, wrinkled, acute; petals entire;" leaves on long foot stalks, seven or five lobed, these again lobed, hairy, veined beneath; petals large, of a fine blue varying to white, or marked with whitish lines. May to July. Britain. P.

13. *G. Macula'tum*. *Spotted Crane's Bill*. "Stalks two flowered; stems forked, erect; leaves five parted, cut, the uppermost sessile;" flower-stalks from the forks of the stem, long, naked; petals pale purple. May to July. North America. 1732. P.

14. *G. Argen'teum*. *Silvery-leaved Crane's Bill*. "Stalks two flowered nearly from the root; leaves seven parted, woolly, silky on both sides; segments linear, three cleft; petals notched;" leaves somewhat

peltate, on long stalks, silvery, shining; flowers large; blush-coloured, veined with red. June, July. France.

1699. P.

15. G. Bohe'micum. *Bohemian Crane's Bill.*

" Stalks two flowered; petals notched, as long as the calyx; leaves five lobed, toothed; axils hispid;" stems many branched; leaves five lobed, on long foot-stalks; flowers on long slender stalks, of a fine blue; axils and beaks black. June to August. Bohemia. 1683. A.

16. G. Pyrena'icum. *Mountain Crane's Bill.*

" Stalks two flowered; leaves kidney-shaped, seven lobed; lobes oblong, obtuse, three cleft; segments three toothed; stem erect, branching; petals notched;" stem hairy, twice or thrice forked; leaves hairy; petals purple or white, large. May to August. Britain. P.

17. G. Robertia'num. *Stinking Crane's Bill, Herb Robert.* " Stalks two flowered; leaves ternate and quinate, gashed; calyx ten angled; capsules wrinkled;" stem spreading, hairy, red; petals rose-coloured, varying to white, entire; anthers purplish: plant foetid. April to October. Britain. A.

This genus, with its ten perfect filaments, formed the last division of the original genus Geranium, and still retains the name; these plants are all of European growth, and are far inferior in beauty to the African tribes. We have no less than thirteen English species, several of them

spring up spontaneously in gardens, and are generally considered as weeds.

Order Polyandria.

VII. **GORDONIA**, named from Mr. James Gordon, an eminent cultivator of exotic plants, at Mile End, near London. Nat. ord. *Linn. Columniferæ*. *Juss. Malvaceæ*. 2 Species.

1. **G. Pubes'cens**. *Downy Loblolly Bay*. "Flowers nearly sessile; leaves downy beneath;" a handsome shrub, whose branches, calyx, and bark of the leaves are clothed with a fine white down; leaves obovate, lanceolate; flowers axillary, near the tops of the branches, white. August, September. South Carolina. 1774. S.

VIII. **STUAR'TIA**, named by Linnaeus in honour of the first Marquis of Bute. Nat. ord. *Linn. Columniferæ*. *Juss. Malvaceæ*. 2 Species.

1. **S. Malachoden'dron**. *Common Stuartia*. "Petals slightly waved; styles combined; flowers lateral, mostly two together; calyx ovate, obtuse;" stem from five to seven feet high, bushy, with round spreading branches; leaves alternate, egg-oblong, acute, veiny, downy about the ribs; flowers large, white, handsome; anthers purple: a shrub rarely seen. May to August. Virginia. 1742. S.

2. **S. Pentagy'na**. *Curled Stuartia*. "Petals

jagged and curled ; styles separate ; flowers axillary," solitary ; calyx beset with lanceolate floral leaves ; leaves ovate, acute, serrate ; leaf stalks bordered, channeled, often reddish ; flowers axillary, solitary, cream-coloured, or tinged with red ; anthers tawny : a plant more common than the last. July, August. Virginia. 1785. S.

ix. PALAVIA, from Don Antonio Palau, professor of botany at Madrid, 1785. Nat. ord. *Linn.* Columniferæ. *Juss.* Malvaceæ. 2 Species,

1. P. Malvifolia. *Mallow-leaved Palavia.* "Smooth ; flower-stalks the length of the leaf-stalks ; stem prostrate," red, branchy ; leaves somewhat lobate, smooth, alternate ; corolla rose-coloured. June to August. Peru. 1794. A.

x. SIDA; the σίδη of Theophrastus seems to be the Pomegranate: why it has been appropriated to this genus of tropical plants does not very clearly appear. Nat. ord. *Linn.* Columniferæ. *Juss.* Malvaceæ. 99 Species.

1. S. Abu'tilon. *Broad-leaved Yellow Sida.* "Leaves roundish, heart-shaped, pointed, toothed, downy ; flower-stalks axillary, solitary, shorter than the leaf-stalks ; capsules round, of numerous double beaked cells ;" stem branched ; flowers yellow, not an inch broad. This species will sometimes flower in the open

air, but will not bear transplanting. July, August.
India. 1596. A.

2. S. Napæ'a. *Smooth Virginian Sida.* "Leaves somewhat five lobed, smooth; lobes oblong, acuminate, toothed; stalks many flowered; capsules awnless, pointed;" stems three feet high; leaves alternate, on long foot-stalks; peduncles divided at the top into three small stalks, each bearing a single white flower. August, September. Virginia. 1748. P.

3. S. Dioi'ca. *Rough Virginian Sida.* "Leaves seven lobed, palmate, rugged; lobes lanceolate, gash toothed; flowers diœcious; corymbs with floral leaves;" leaves nearly a foot in diameter; stems seven feet high, stalks bearing several large white flowers in heads. August, September. Virginia. 1759. P.

All the plants of this extensive genus except the above described, require a great deal of heat, and are not often seen in the English stoves. The last two have been erected into a new genus by modern botanists, under the name of Napæa.

XI. GOSSYPIUM, a word supposed to be of Egyptian origin. Nat. ord. Linn. Columniferæ. Juss. Malvaceæ. 10 Species.

1. G. Herba'ceum. *Common Cotton.* "Leaves five lobed, glaucous, pointed, with one gland beneath; stem herbaceous, smooth," about three feet high, bushy, branched, zigzag; flowers yellow, purple at the base; capsule the size of a Walnut, enclosed in

the calyx like a Filberd. July. East Indies. 1504.

A. Hot Ho.

2. G. Barbaden'se. *Barbadoes Cotton.* "Upper leaves three lobed, lower five lobed, entire, with three glands underneath; stem smooth," somewhat shrubby, from six to twelve feet high; branches almost erect; leaves alternate; flowers large, yellow, turning finally red; capsule sometimes dotted with black. September. Barbadoes. 1759. B. Hot Ho.

The first is the species usually cultivated in the Levant and in Asia, the second in the West Indies and America, but, like all plants long subservient to the use of mankind, they are apt to form numerous varieties which it is difficult to distinguish: the produce of another species, G. Arbo'reum, or Tree Cotton, is also in use in the East Indies. They all require great heat. Cotton furnishes with clothing the inhabitants of the four quarters of the globe, and has become in Britain the foundation of the most important manufactories, supporting not only whole towns but districts, and affording occupation, maintenance, and wealth to thousands.

XII. LAVATER'A, in honour of Dr. Lavater, a physician of Zurich, 1708, of course not the celebrated physiognomist. Nat. ord. Linn. Columniferae. Juss. Malvaceæ. 12 Species.

1. L. Arbo'rea. *Sea Tree Mallow.* "Stem arbo'resent; leaves downy, plaited, with seven angles; flower-stalks axillary, clustered, single flowered;" stem from six to nine feet high, round, thick, branch

ing chiefly at the top; flowers numerous, axillary, purple, with dark blotches at the base. July to October. Britain. B.

2. L. Thuringiaca. *Great-flowered Lavatera.*
“ Stem herbaceous, downy; leaves somewhat downy, the lower ones angular, the upper three lobed; flower-stalks axillary, clustered, single flowered;” stems few, erect, three or four feet high, clothed with soft short hairs; flowers on long stalks; petals large, pink, veiny. July to September. Germany. 1731. P.

3. L. Cre'tica. *Cretan Lavatera.* “ Stem herbaceous, rather hairy; leaves acutely five lobed; flower-stalks axillary, aggregate;” leaves on long stalks; corolla twice the length of the calyx, pale blue; petals notched. July to September. Candia. 1723. A.

4. L. Trimes'tris. *Common Annual Lavatera.*
“ Stem herbaceous, rough, with deflexed hairs; leaves smoothish, heart-shaped, angular, the lower ones rounded; flower-stalks solitary, shorter than the leaves;” stem branched, about two feet high; flowers abundant, large, pink or white. July to September. South of Europe. 1633. A.

This genus is one of the handsomest of the Mallow tribe; it is scarcely to be found out of Europe. The Sea Tree Mallow grows much higher in gardens than when found wild. Some other shrubby species, not much exceeding this in beauty, are preserved in green-house collections.

XIII. *MAL'VA*, from *μαλάσσω*, to soften, on account

of its emollient qualities. Nat. ord. *Linn.* Columiferae. *Juss.* Malvaceæ. 55 Species.

1. *M. America'na.* *American Mallow.* "Leaves cordate, crenate; lateral flowers solitary, terminating, flowers in spikes;" stem a foot high; branches few, short, upright; leaves scarcely downy; stalks one flowered; corolla yellow. June, July. West Indies. 1758. A.

2. *M. Peruvia'na.* *Peruvian Mallow.* "Stem erect, herbaceous; leaves palmate; spikes directed one way, axillary; seeds with small teeth;" stems from two to three feet high, slightly hairy; leaves plaited, smooth, veined; corollas small purple. June to August. Peru. 1759. A.

3. *M. Limen'sis.* *Blue-flowered Mallow.* "Stem upright, herbaceous; leaves lobed; spikes directed one way, axillary; seeds even;" a plant akin to the last; flowers blue. July. Peru. 1768. A.

4. *M. Carolinia'na.* *Creeping Carolina Mallow.* "Stem creeping; leaves five lobed and palmate, toothed, gashed; flower-stalks longer than the leaf-stalks; petals entire; seeds woolly;" flowers small, pale red; claws darker. June, July. Carolina. 1723. A.

5. *M. Rotundifolia.* *Dwarf Mallow.* Stems prostrate; leaves roundish, heart-shaped, five lobed; fruit-stalks bent downwards; stems numerous, simple; flowers flesh-coloured, veined. June to September. Britain. A.

6. M. *Sylvestris*. *Common Mallow*. " Stem erect, herbaceous; leaves with seven sharpish lobes; leaf-stalks and flower-stalks hairy;" stem branched, round, many flowered; leaves alternate; stalks crowned; flowers reddish purple. May to October. Britain. P.

7. M. *Mauritia'na*. *Ivy-leaved Mallow*. " Stem erect, herbaceous; leaves five lobed, obtuse; flower-stalks and leaf-stalks smooth," much resembling the last; outer calyx lanceolate; flowers blood red. June, July. South of Europe. 1768. A.

8. M. *Hispanica*. *Spanish Mallow*. " Stem erect; leaves half orbicular, crenate; outer calyx two leaved;" stems rough; flower-stalks solitary, one flowered; petals flesh-coloured. July. Spain. 1710. A.

9. M. *Verticilla'ta*. *Whorl-flowered Mallow*. " Stem erect; leaves angular; flowers axillary, crowded, sessile; calyxes rugged;" stems three feet high; leaves heart-shaped, five or seven angled, smooth, on long stalks; flowers whitish red, small; stalks one flowered. June, July. China. 1683. A.

10. M. *Cris'pa*. *Curled Mallow*. " Stem erect; leaves creeping, angular; flowers axillary, crowded;" stems four or five feet high; leaves bright green, pubescent; flowers sessile, small, numerous, flesh-coloured. June to August. Syria. 1573. A.

11. M. *Alce'a*. *Vervain Mallow*. " Stem erect; lower leaves angular, upper five parted, somewhat

rugged ; leaflets of the outer calyx oblong, obtuse ;" stems two or three feet high, rugged, hairy ; flowers terminating in bunches, bright purple, large ; calyx small. July to October. Germany. 1597. P.

12. M. Moscha'ta. *Musk Mallow.* " Radical leaves kidney-shaped, cut ; stem leaves in five deep, wing-cleft, finely divided segments ; calyx hairy ;" flowers large, handsome, rose-coloured : the plant, in warm weather, of a musky odour. July, August. Britain. P.

13. M. Tournefortia'na. *Tournefort's Mallow.* " Stem decumbent ; radical leaves five parted, three lobed, linear ; flower-stalks longer than the stem leaf ;" calyx large, prickly, pointed ; corolla blue, four times as large as the calyx ; stems much branched at the base ; leaves bristly at the ends. July, August. Spain. 1759. A.

14. M. Ægyptia. *Egyptian Mallow.* " Stem erect ; leaves three parted ; segments three cleft, toothed at the apex ; corollas smaller than the calyx ; outer calyx two leaved ;" stems a foot long, smooth ; leaves on long stalks ; flowers single from the axils, at the top in clusters, pale blue. June, July. Egypt. 1730. A.

15. M. Capen'sis. *Cape Mallow.* " Stem arborescent ; leaves ovate, five lobed, toothed ; flower-stalks longer than the leaf-stalks ;" stem ten to twelve feet high, branchy its whole length, closely covered with hairs ; leaves hairy ; flowers deep red, smaller

than those of the Common Mallow. January to December. The Cape. 1713. S. Gr. Ho.

Many other species of this numerous genus are inhabitants of our green-houses, but are not particularly distinguished by their beauty or remarkable qualities. The Common Mallow abounds with a mild mucilage, useful in fermentations: by the ancients it was admitted as an article of diet, with lettuce and other herbs as a salad. The *levesque malvæ* of Horace is familiar to every one, the phrase being supposed to infer that the plant was peculiarly light of digestion.

xiv. MA'LOPE, probably a corruption of *μαλαχη*, the Greek name for the Mallow. Nat. ord. *Linn.* Columniferæ. Juss. Malvaceæ. 3 Species.

1. M. Malacoi'des. *Barbary Bastard Mallow.* "Leaves ovate, crenate, smooth above; stalks solitary, axillary;" stem erect, hairy, rough; leaves somewhat heart-shaped; flowers rose-coloured; petals wedge-shaped; fruit collected into a head like a Blackberry. June, July. Tuscany. 1710. B.

xv. HIBIS'CUS, *ἱβισκος* in Dioscorides, a Greek name of unknown derivation. Nat. ord. *Linn.* Columniferæ. Juss. Malvaceæ. 66 Species.

1. H. Palus'tris. *Marsh Hibiscus.* "Stem herbaceous, quite simple; leaves ovate, partly three lobed, downy beneath; flower-stalks distinct from the leaf-stalks;" stems about two feet high, leafy,

round, smooth; flowers large, rose-coloured, darker in the centre; stamens and pistil yellow; stigmas large, globose. July, August. North America. 1759. P.

2. H. Ro'sa Sinen'sis. *Chinese Rose Hibiscus.* "Leaves ovate, pointed, toothed, smooth, entire at the base; stem arborescent; outer calyx eight leaved;" leaves of a fine green; flowers large, crimson; stamens and pistils longer than the petals, red; anthers yellow: a beautiful plant, universally cultivated in Hindostan and China. July, August. East Indies. 1731.

S. Hot Ho.

3. H. Syria'cus. *Shrubby Hibiscus, or Althaea Frutex.* "Leaves egg wedge-shaped, three lobed, cut, smooth; outer calyx eight leaved, as long as the inner; stem arborescent," about six feet high, sending out many woody branches; blossoms open, bell-shaped, rose-coloured, with a crimson eye, numerous, varying to purple, white, variegated, and rarely pale yellow, in all cases with a darker eye. August, September. Syria. 1596. S.

4. H. Virgi'nicus. *Virginian Hibiscus.* "Leaves pointed, unequally toothed; lower leaves heart-shaped, undivided, upper leaves heart-shaped, oblong, three lobed; flowers drooping; pistils nodding;" stem green, upright; peduncles one flowered, solitary, forming something like a naked raceme at top; flowers pale red. July to September. North America. 1798. P.

5. H. Tri'onum. *Bladder Ketmia, or Hibiscus.*
 "Leaves in three deep divisions, cut, wing-cleft; inner calyx inflated, membranous, hairy;" stem a foot and a half high, with soft spines; flowers stalked, bell-shaped, sulphur colour, with five purple external stripes and a violet eye; stigmas purple, hairy; the leaves vary from broad to narrow. June to September. Italy. 1596. A.

This last species is both curious and beautiful, long known in gardens under the name of Venetian Mallow; or Flower of an Hour; indeed the whole genus is the finest of its natural order, the flowers of several being remarkably showy and handsome: none of them, however, are sweet scented, and they are chiefly natives of very warm climates.

XVI. KITAIBELIA, from Dr. Kitaibel, an Austrian Botanist. Nat. ord. Linn. Columniferæ. Juss. Malvaceæ. 1 Species.

1. K. Vitifo'lia. *Vine-leaved Kitaibelia.* Stem round, even, about six feet high, covered with small viscid glandular hairs; leaves alternate, stalked, five lobed, unequally toothed; flowers axillary, about three, on stalks; inner calyx woolly, smaller than the outer one; petals white. July to September. Hungary. 1801. P.

XVII. ALTHÆA, from αλθεῖ, to heal; on account of its emollient qualities. Nat. ord. Linn. Columniferæ. Juss. Malvaceæ. 9 Species.

1. A. *Officinalis*. *Common Marsh Mallow.*

"Leaves woolly, oblong, ovate, scarcely three lobed, toothed;" stems erect, nearly three feet high; leaves stalked, alternate; panicles axillary, dense, many flowered; flowers purplish; whole herb very softly pubescent. July to September. Britain. P.

2. A. *Narbonensis*. *Narbonne Marsh Mallow.*

"Leaves woolly, lower ones five or seven lobed, upper three lobed;" flower-stalks solitary, one flowered; stems from six to seven feet high, the thickness of a finger, hairy, with white stellated hairs; corolla purple, rose colour, twice as long as the calyx; anthers dark purple; stigmas white. August, September. South of Europe. 1780. P.

3. A. *Cannabina*. *Hemp-leaved Marsh Mallow.*

"Leaves woolly, rugged, lower ones palmate, upper ternate; middle leaflet longer;" stem woody, four or five feet high, branched; flowers axillary, not so large as those of the Common Marsh Mallow, but of a deeper red; the calyx much larger. June, July. South of Europe. 1597. P.

4. A. *Hirsuta*. *Hairy Marsh Mallow.* "Leaves cordate, obtuse, five lobed, smooth above; stem hairy;" flower-stalks solitary; a low plant, with trailing branches; flowers axillary, smaller than the common sort; petals with purplish bases. June, July. South of Europe. 1683. A.

5. A. *Rosea*. *Common Holly Hock.* "Leaves roundish, indented, angled, from five to seven lobed;"

stem sometimes eight feet high ; flowers of various colours, white, pale red, deep red, blackish red, purple, yellow, and flesh colour, all of them often double. There is a dwarf variety called Chinese Holly Hock, with variegated flowers, much esteemed. July to September. China. 1573. B.

6. A. Ficifolia. *Fig-leaved Holly Hock, or Marsh Mallow.* "Leaves palmate, with seven obtuse lobes ;" flowers as in the last, of which Linnæus thinks it only a variety ; but the leaves constantly differ. June to September. The Levant. 1597. B.

The first species, particularly the root, abounds with a mild mucilage, which has very generally been prescribed as a pectoral, and also in calculous disorders : a fresh infusion of it is much superior to the syrup kept in the shops. The gaudy, yet graceful, Hollyhock has long been the universal inmate of every cottage garden.

XVIII. CAMEL'LIA, in honour of G. J. Kamel, a Jesuit, author of a botanical work, on the Philippine Islands. Nat. ord. *Linn.* Columniferæ. *Juss.* Aurantiæ. 2 Species.

1. C. Japo'nica. *Camellia, or Japan Rose.* "Leaves acutely serrate, acuminate ;" in its native country a lofty, large, evergreen tree ; branches round and smooth ; leaves alternate, egg-shaped, shining, thick, stiff ; flowers large, beautiful, of a lively red, scentless, sometimes double, varying into blush-colour, white or striped ; petals uniting at bottom into a tube. January to May. Japan. 1789. S. Gr. Ho.

2. C. Sasan'qua. *Lady Banks's Camellia*. "Leaves obtusely serrate, notched at the end;" stem more slender than the former; leaves thinner, narrower; flowers much smaller, solitary, terminating; petals from five to seven, snow white, deciduous. August to November. China. 1811. S. Gr. Ho.

These beautiful shrubs are in the highest estimation: the latter so much resembles the Tea plant that it is distinguished only by its coalescing stamens; it yields a nut from which is expressed an esculent oil. The Chinese call the plant "Flower of Tea," and they mix the leaves with Tea to improve its flavour: it is cultivated in China with much facility, and in great abundance.

CLASS XVII.

DIADELPHIA.

Order Hexandria.

I. FUMARIA. Calyx of two leaves, inferior; corolla ringent, gibbous and nectariferous at the base; each filament bearing three anthers.

Order Octandria.

II. POLYGALA. Calyx of five leaves, two of them wing-like, coloured; legume inversely heart-shaped, of two cells; standard of the corolla cylindrical.

*Order Decandria.**I. All the filaments united at the base.*

III. AMORPHA. Calyx bell-shaped, five cleft; standard of the corolla ovate, concave; wings none; keel none; legume two seeded, curved.

IV. SPARTIUM. Calyx extended downwards; filaments adhering to the germen; stigma lengthened, downy on the upper side.

V. GENISTA. Calyx two lipped, the upper lip with two teeth, the lower with three; standard of the corolla oblong, bent backwards from the rest of the flower.

VI. LUPINUS. Calyx two lipped; five of the anthers round, and five oblong; legume leathery, columnar, compressed.

VII. ANTHYLLIS. Calyx inflated, inclosing the legume, which is roundish, one to three seeded.

viii. ULEX. Calyx of two leaves; legume scarcely longer than the calyx.

ix. ONONIS. Calyx in five linear segments; standard of the corolla scored with lines; legume turgid, rhomboid, sessile; filaments united without an opening.

II. *The filaments not united, but properly diadelphous.*

1. *Stigmas downy.*

x. COLUTEA. Calyx five toothed; stigma bearded on one side; legume stalked, membranous, inflated, opening at the base on the upper side.

xi. PHASEOLUS. Keel of the corolla spirally twisted, as are also the stamens and style; stigma downy.

xii. OROBUS. Calyx obtuse at the base, its two upper segments deeply and obtusely divided, shriveling; style linear, roundish, downy above.

xiii. PISUM. Two upper segments of the calyx broadest; style triangular, keeled and downy at the upper side; filaments in two distinct sets.

xiv. LATHYRUS. Two upper segments of the calyx shortest; style flattened, downy on the upper side, broader near the top.

xv. VICIA. Stigma bearded across on the lower side.

2. *Legumes mostly two celled.*

xvi. ASTRAGALUS. Legume two celled, gibbous.

xvii. BISERRULA. Legume two celled, flat, toothed; partition contrary to the valves.

XVIII. PHACA. Calyx with five teeth, the two upper ones more remote; legume half divided into two cells, inflated.

3. Legumes one or two seeded.

XIX. TRIFOLIUM. Flowers in a head; calyx tubular, five cleft; keel simple, shorter than the wings and standard; stigma smooth; legume not bursting, deciduous, scarcely longer than the calyx.

XX. GLYCYRRHIZA. Calyx with two lips, the upper three cleft, the lower entire; legume ovate, compressed, of one cell; seeds one or two.

4. Legume somewhat jointed.

XXI. HEDYSARUM. Calyx five cleft; keel of the corolla compressed, broad towards the end, blunt; legume with single seeded closed joints, roundish, compressed.

XXII. CORONILLA. Calyx two lipped; upper lip with two connected teeth, the lower with three teeth, and smaller; standard of the corolla scarcely longer than the wings; legume columnar, straight, long, contracted between each seed.

XXIII. ORNITHOPUS. Legume jointed, round, curved, the joints falling off separately.

XXIV. SCORPIURUS. Legume jointed, divided by partitions across, cylindrical, spirally rolled inwards.

XXV. HIPPOCREPIS. Legume jointed, compressed, curved, with many deep sinuses in one of its edges.

5. Legumes one celled, many seeded.

xxvi. TRIGONELLA. Standard and wings nearly equal, spreading in the form of a three-petaled corolla; stigma smooth; legume of one cell with many seeds, compressed, longer than the calyx.

xxvii. GLYCINE. Calyx two lipped; stamens in distinct sets; keel of the corolla forcing back the standard with its point.

xxviii. CLITORIA. Corolla inverted; standard very large, spreading, overshadowing the wings.

xxix. ROBINIA. Calyx four cleft; the upper segment divided; standard roundish, reflexed; stamens in two distinct sets; legume elongated, gibbous, of one cell, with many seeds.

xxx. INDIGOFERA. Calyx spreading; keel of the corolla with an awl-shaped spur on each side; legume linear.

xxxI. CICER. Calyx five parted, the length of the corolla; the four upper segments incumbent on the banner; legume rhomboid, turgid, commonly two seeded.

xxxII. ERVUM. Calyx five parted, the length of the corolla; stigma headed, obtuse, bearded all over.

xxxIII. CYTISUS. Calyx two lipped, the upper with two teeth, the lower with three; legume tapering at the base, of one cell with several seeds.

xxxIV. GALEGA. Calyx with five awl-shaped nearly equal teeth; legume of one cell, linear, with oblique streaks between the seeds.

XXXV. LOTUS. Legume cylindrical, straight; wings of the corolla cohering lengthways above; calyx tubular; filaments growing broader at the ends.

XXXVI. MEDICAGO. Legume compressed, and spirally twisted, forcing back the keel of the corolla from the standard.

For the purpose of facilitating investigation, Linnaeus has arranged the greater part of the genera, forming the last order, under the following commodious distribution.

TWINING. Phaseolus, Clitoria, Glycine.

LEAVES PINNATE WITHOUT AN ODD LEAFLET.
Orobus, Pisum, Lathyrus, Vicia, Ervum.

LEAVES PINNATE WITH AN ODD LEAFLET. Biserrula, Astragalus, Phaca, Hedysarum, Glycyrrhiza, Indigofera, Galega, Colutea, Amorpha.

LEAVES TERNATE. Trifolium, Lotus, Medicago, Genista, Cytisus, Ononis, Trigonella, Phaseolus, Clitoria.

FLOWERS IN UMBELS. Lotus, Coronilla, Ornithopus, Hippocrepis, Scorpiurus.

CLASS XVII.

DIADELPHIA.

Order Hexandria.

I. FUMARIA, because by its pungency it affects the eyes like *fumus*, smoke. Nat. ord. *Linn.* Corydalis. Juss. Papaveraceæ. 30 Species.

** Corollas with two spurs.*

1. F. Cucullaria. *Naked-stalked Fumitory, or Breeches Flower.* "Flower-stalk naked; raceme simple; spur straight;" root leaves in pairs, thrice ternate, gashed, smooth, slender, with red stalks; flowers four or five, pendulous; calyx ovate, small, white; corolla white, border yellow, two lipped, throat closed, yellow; spurs equal, distant. June, July. North America. 1731. P.

2. F. Formosa. *Blush Fumitory.* "Flower-stalk naked: raceme compound; spurs curved;" stalk longer than the leaves; partial flower-stalks several from the same point; corollas pendent, of a bright carnation; ends of the spurs turned towards each other; leaves twice or thrice ternate. June, July. North America. 1796. P.

*** Corollas with one spur.*

3. F. Nobilis. *Great-flowered Fumitory.* "Stem simple; raceme terminal; floral leaves oblong, acute, shorter than the flower; leaves pinnate; leaflets three parted, jagged;" flower-stalks one or two, five angled; root leaves seven to nine; stem leaves four, sessile; raceme blunt, the flowers directed one way; flowers double, white, with a yellow border, smelling like Cowslips. May. Siberia. 1783. P.

4. F. Bulbo'sa. *Hollow-rooted Fumitory.* "Stem simple; raceme terminal; floral leaves oblong, longer than the flower-stalks; leaves doubly ternate, oblong,

somewhat acute; root tuberous, hollow ;" corolla white, blush-coloured or purple : a smaller variety with a solid root and palmate floral leaves, native of England, is made by some a distinct species. February to April. Europe. 1596. P.

5. F. *Sempervirens*. *Glauceous Fumitory*. "Stem branching, erect; seed vessels linear, thrice as long as the flower-stalks ;" stem a foot and a half high; leaves smooth, pale, twice pinnate; flowers in loose panicles, of a pale purple, with yellow lips. July, August. North America. 1683. A.

6. F. *Lutea*. *Yellow Fumitory*. "Stem branching, diffuse, with obtuse angles; seed vessels cylindric, linear, shorter than the flower-stalk ;" spur very short, rounded; stems many, succulent; leaves of many irregular leaflets, three cleft at the top; flowers in a sort of raceme, eight or nine, yellow, with a tawny apex. April to October. A doubtful native of England. P.

7. F. *Capnoïdes*. *White-flowered Fumitory*. "Stem branched, diffuse, with acute angles; seed vessels linear, four cornered, longer than the flower-stalks ;" leaves more than doubly compound; racemes naked; corollas whitish, with the wings yellow at the tip, and drawn to a point. May to October. South of Europe. 1596. A.

8. F. *Enneaphyl'a*. *Nine-leaved Fumitory*. "Stem branching, erect; leaves twice ternate; leaflets egg heart-shaped, undivided, acute ;" stems weak, much

divided; flowers in small loose panicles from the side of the stalks, of a greenish white. May to July. Spain. 1714. P.

9. F. *Officinalis*. *Common Fumitory.* "Stem branched, diffused; seed vessels globose, blunt, one seeded; leaves more than doubly compound; leaflets gashed, wedge-shaped, lanceolate;" stems angular, enlarged at the joints; leaves somewhat fleshy; flowers alternate, on very long spikes, reddish tipped with purple. May to August. Britain. A.

10. F. *Capreola'ta*. *Ramping Fumitory.* "Stem branching, climbing; seed vessel globose, one seeded; leaves thrice ternate; leaflets cut, egg wedge-shaped; stems climbing by the twisted leaf stalks;" flowers flesh-coloured; the apex dark blood-coloured. May to September. Britain. A.

11. F. *Spica'ta*. *Narrow-leaved Fumitory.* "Stem branching, erect; seed vessel oblong, compressed, one seeded; leaves more than doubly compound; leaflets three parted, thread-form;" flowers in a loose spike, of a deep red; stems many, the middle one larger. July, August. South of Europe. 1714. A.

12. F. *Clavicula'ta*. *Climbing Fumitory.* "Stem branching, climbing; seed vessel oblong, compressed, two seeded; lower leaves twice ternate; stem leaves simply ternate, ending in tendrils;" herb tender, glaucous; spikes few flowered; flowers whitish; stem three cornered. June, July. Britain. A.

13. F. *Vesica'ria*. *Bladdered Fumitory.* "Stem

branching, climbing; seed vessel globular, inflated, veined; leaves tendriled;" stems trailing, about two or three feet long, divided, with small branching leaves; flowers in loose panicles, of a whitish yellow; peduncles from one to four flowered. June, July. The Cape. 1696. A. Gr. Ho.

These very pretty plants form an extremely natural genus: the seed vessel however differs much in many of the species. F. Formosa is a very singular and beautiful plant. Common Fumitory is yet in use by some practitioners in various obstructions, and was once thought to be beneficial in dimness of sight and other diseases of the eyes.

Order Octandria.

II. POLYGALA, from πολυς, much, and γαλα, milk, it being supposed to increase the milk of cattle. Nat. ord. Linn. Lomentaceæ. Juss. Pediculares. 76 Species.

* *Crested, the flowers having a feathery appendage.*

1. P. Ama'ra. *Bitter Milk Wort.* "Flowers crested, in bunches; wings of the calyx three nerved, obtuse, longer than the corolla; stems erect; leaves obtuse; root leaves obovate, large;" flowers sky blue, sometimes white: plant larger than the next species. June. Europe. 1775. P.

2. P. Vulga'ris. *Common Milk Wort.* "Flowers crested, in bunches; wings of the calyx three ribbed,

obtuse, the length of the corolla : stems herbaceous, simple, procumbent ; leaves linear, lanceolate, acute," numerous, smooth, entire ; flowers usually blue, frequently pink or white, always veined with green. May, June. Britain. P.

3. P. Major. *Large Austrian Milk Wort.* " Flowers crested, in bunches ; wings of the calyx many nerved, obtuse, dagger-pointed, shorter than the corolla ; stems erect ; leaves linear, lanceolate, acute ;" plant nearly allied to the last, but larger, more upright ; flowers of a bright red purple. July, August. Austria. 1739. P.

** *Beardless, shrubby ; flowers without a feathery appendage.*

4. P. Chamæbux'us. *Box-leaved Milk Wort.* " Flowers beardless ; flower-stalks terminal, axillary, mostly two flowered ; leaves oblong, lanceolate ; stem shrubby," about a foot high ; branches closely garnished with stiff, smooth, lucid green leaves ; flowers conspicuous, beautiful white without, purplish yellow within, of a grateful odour ; keel of the corolla with a terminal pouch. May, June. Switzerland. 1658. E. S.

*** *Beardless, herbaceous ; stem simple.*

5. P. Se'nega. *Rattle Snake Root, or Officinal Milk Wort.* " Flowers beardless ; cluster terminal, stalked, solitary, tapering ; stem erect, simple, herbaceous ; leaves egg lance-shaped ;" root perennial,

somewhat woody ; stems a foot high, slender, clothed with scattered leaves ; cluster of flowers pale red, or whitish. July. North America. 1739. P.

6. P. Lu'tea. *Yellow flowered Milk Wort.* " Flowers beardless ; cluster dense, cylindrical, terminal ; floral leaves bristly ; stem erect, simple ; leaves lanceolate, the radical ones obovate ;" stem slender, a foot high ; leaves acute ; flowers of a fine yellow, in a round-headed cluster. June, July. Virginia. 1739. A.

This numerous genus has several very elegant species, which are the ornaments of our more curious green-houses. The Rattle Snake Root was once thought to be an antidote to the bite of serpents, but is now much discredited ; the plant, however, possesses stimulating and resolving qualities, of which several other species partake in a less powerful degree.

Order Decandria.

III. AMOR'PHA, from a privative, and μόρφη, form. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 2 Species.

1. A. Frutico'sa. *Shrubby Bastard Indigo.* " Calyx of four obtuse teeth, and one sharp tooth ;" a shrub rising with many irregular stems to twelve feet, with long pinnate leaves ; flowers at the end of the branches, in long slender spikes, small, and of a deep purple : a coarse sort of indigo can be made from the young shoots. June, July. Carolina. 1724. S.

iv. SPAR'TIUM, from σπάρτη, a rope; because the long slender twigs or bark may be used in making cordage. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 25 Species.

* *Leaves simple.*

1. S. Jun'ceum. *Spanish Broom.* "Branches opposite, round, flowering at the extremity; leaves lanceolate; legume linear;" height about six feet; branches copious, long, twiggy; blossoms in a loose spike, large, yellow, sweet, often double, but not improved in beauty. July to September. South of Europe. 1548. S.

2. S. Monosper'mum. *White single-seeded Broom.* "Branches round, furrowed; clusters lateral, of a few crowded flowers; seeds solitary; leaves lanceolate, silky, as well as the wings and keel;" stem from five to six feet high; branches numerous; flowers white, with a dark red calyx; standard minutely streaked with crimson, silky on the back. June, July. Spain. 1690. Gr. Ho. S.

3. S. Pur'gans. *Purging Broom.* "Branches round, furrowed; flowers axillary, solitary; leaves lanceolate, somewhat sessile, silky;" petals smooth; legume shaggy; stem woody, much branched; flower-stalks silky; calyx partly silky; petals yellow; leaves small. June, July. South of France. 1763. S.

4. S. Scor'pius. *Scorpion Broom.* "Branches round, scored, spreading, spinous; flower-stalks ag-

gregate, axillary; leaves oblong, hairy, with a spinous point;" leaves small, with silky hairs on each side; flowers yellow, their stalks as long as the leaves, and with them growing on the young branches only.

March, April. South of France. 1570. S.

** *Leaves ternate.*

5. S. *Multiflorum.* *Portugal White Broom.*
" Leaves ternate or simple, silky, ovate, lanceolate; branches scored, straight, covered with flowers; legume silky, with two seeds;" stem from four to six feet high, with copious wand-like branches, covered from top to bottom with elegant, snow-white, stalked, axillary flowers; leaves seldom ternate. May. Portugal. 1752. S.

6. S. *Angularatum.* *Angular branched Broom.*
" Leaves mostly ternate, linear, oblong; branches with six angles; flowers terminal, racemose;" legume elliptical, acute at each end, one or two seeded; stem shrubby, with numerous upright branches; flowers small, yellow, numerous, in long clusters. May, June. The Levant. 1739. S.

7. S. *Patens.* *Woolly podded Broom.* " Leaves ternate, stalked, obovate; branches round, scored; flowers lateral, drooping in pairs;" branches spreading widely; flowers large, yellow, tumid; calyx deeply divided, besprinkled with silky hairs; legumes very hairy. June, July. Portugal. 1752. S.

8. S. *Scoparium.* *Common Broom.* " Leaves chiefly

ternate, stalked, obovate; branches angular; flowers lateral, solitary; calyx two lipped, ends of the lips withered; legume fringed;" stem bushy, from three to eight feet high, with numerous ascending evergreen twigs; flowers axillary, loosely pendulous, solitary, on long stalks, large, yellow; petals widely spread in a hot sunshiny day; style bowed almost into a circle. April to June. Britain. S.

9. *S. Radiatum. Starry Broom.* "Leaves ternate, opposite; linear, with short dilated foot-stalks; branches aggregate or opposite, angular; clusters in heads, terminal; legume ovate;" leaves linear, silky; calyx silky, tubular; branches numerous, naked, radiating, crowned with tufts of handsome yellow flowers. June, July. Italy. 1758. S.

10. *S. Ferrox. Fierce Broom.* "Leaves partly ternate, elliptic, oblong, pointed; branches scored, with spinous points; clusters terminal; legume linear, hoary;" stem three or four feet high; branches straight, leafy, which after bearing a cluster of yellow flowers become very sharp thorns; germ silvery; seeds numerous. June, July. Barbary. 1800. S.

The Brooms are an ornamental genus, of a shrubby habit; few of them are handsomer than the common sort *S. Scoparium*, with its profusion of blossoms; its twigs are used for besoms; the flower-buds are pickled in the manner of capers; the tops and leaves have been prescribed with success in dropsical cases.

v. **GENISTA**, from *genu*, the knee, on account of

the angular insertion of the twigs. Nat. ord. *Linn.*
Papilionaceæ. Juss. Leguminosæ. 25 Species.

* *Unarmed, or without thorns.*

1. *G. Candicans. Hoary Genista, or Montpelier Cytisus.* "Leaves ternate, obovate, pubescent, hairs adpressed; peduncles many flowered, terminal; branches angular; legumes hairy;" stem seven or eight feet high; upper part of the branches sending out smaller flowering branches, supporting five yellow flowers. April to June. South of Europe. 1785. S.

2. *G. Trique'tra. Triangular Genista, or Broom.* "Leaves ternate, upper ones simple; branches three sided, procumbent;" a hardy evergreen trailing shrub, requiring to be tied up, and properly trained to a stake; flowers yellow, in great profusion. May, June. Corsica. 1770. S.

3. *G. Sagitta'lis. Jointed Genista, or Broom.* "Branches two-edged, membranous, jointed; leaves egg lance-shaped;" branches several, spreading flat on the ground, herbaceous; flowers in close spikes at the ends of the branches, yellow. May, June. Germany. 1570. S.

4. *G. Tincto'ria. Dyer's Green Weed, Wood Waxen.* "Leaves lanceolate, smooth; branches round, scored, erect; legumes smooth;" stems many, from one to two feet high; leaves sessile, simple, alternate; flowers nearly sessile, yellow, in short spikes. June to August. Britain. S.

5. G. Sibirica. *Siberian Genista.* "Leaves lanceolate, smooth; branches equal, round, upright," not scored; leaves somewhat narrower than in the former, not at all woolly; flowers yellow, remote, in a kind of panicled spike. June to August. Siberia. 1785. S.

6. G. Flo'rida. *Spanish Dyer's Genista, or Broom.* "Leaves lanceolate, silky; branches round, scored; clusters of flowers leaning one way;" stems woody, two or three feet high; leaves small, alternate; spikes of flowers terminating, yellow, succeeded by short pods. June to August. Spain. 1752. S.

7. G. Pilo'sa. *Hairy Genista, or Broom.* "Leaves lance-shaped, obtuse, hairy beneath; flower-stalks very short, axillary; flowers in short spikes; stem tubercled, scored, procumbent;" corolla yellow, and, except the wings, hairy on the outside; leaves sometimes three or four together; stem quite prostrate. May, June. England. S.

** *Thorny.*

8. G. An'glica. *Needle Green Weed, Petty Whin.* "Thorns simple, awl-shaped; flowering branches unarmed; leaves oblong, smooth; branches leafy, terminal; corolla smooth;" legumes straightish; branches rigid; spines long, conspicuous, spreading; flowers small, lemon-coloured, standard golden. May, June. Britain. S.

9. G. Germa'pica. *German Genista.* "Thorns:

compound, warty; flowering branches unarmed; leaves lanceolate, hairy; terminal branches naked; keel of the corolla pubescent;" stems a foot and a half high, much branched, the old branches leafless, but with strong thorns; flowers in a long spike, almost sessile, yellow; the anthers in some flowers white. June to August. Germany. 1773. S.

10. G. Hispa'nica. *Dwarf. Prickly Genista.*
" Thorns doubly compound; flowering branches, unarmed; leaves linear, lanceolate, hairy; clusters terminal, somewhat in a head;" leaves small, alternate; flowers yellow; branches erect, channeled; the plant much allied to the last. June, July. Spain. 1759. S.

11. G. Lusi'a'nica. *Portugal Genista, or Broom.*
" Stem leafless; thorns in cross pairs on the branches;" branches leafy; flowers yellow. March to May. Portugal. 1771. S.

The plants comprehended in this genus bear much resemblance to those of the last, but they are of humbler growth. Nos. 1, 2, 6, 10, 11, require a sheltered situation and a dry soil. From the flowers of G. Tinctoria a yellow colour may be obtained, and with the addition of woad a green, excellent for the purpose of dyeing wool.

VI. LUPI'NUS, from *lupus*, a wolf; on account of its exhausting quality to the soil. Nat. ord. Linn. Papilionaceæ, Juss. Leguminosæ. 19 Species.

1. L. Peren'nis. *Perennial Lupine.* " Calyxes alternate; without appendages; upper lip notched,

lower lip entire;" stems several, erect, channelled; leaves on long stalks, digitate; leaflets five to eleven, spear-shaped, with a few hairs at their edge; flowers in long loose spikes, stalked, of a pale blue. May to July. Virginia. 1858. P.

2. L. Al'bus. *White Lupine.* "Calyxes alternate, without appendages, upper lip entire, lower lip three toothed;" stem thick, upright, two feet high, dividing towards the top into several branches; leaves digitate; leaflets seven or eight, dark greyish, with a silvery down; flowers white, sessile, in loose spikes. July, August. The Levant. 1596. A.

3. L. Va'rius. *Small blue Lupine.* "Calyxes half whorled, with appendages, upper lip cleft, lower lip slightly three toothed;" stem channelled, near three feet high; leaves digitate; leaflets five to seven, oblong, joined at the base, hairy; flowers in spikes, pale blue. July, August. South of Europe. 1596. A.

4. L. Hirsutus. *Great blue Lupine.* "Calyxes alternate, with appendages, upper lip two-parted, lower three toothed;" stem three to four feet high, covered with a soft brownish down; leaves digitate; leaflets nine to eleven, wedge-shaped, hairy; flowers in a loose spike, large, of a beautiful blue, scentless. July, August. South of Europe. 1629. A.

5. L. Pilo'sus. *Rose Lupine.* "Calyxes in whorls, with appendages, upper lip two-parted, lower lip entire;" leaves digitate; leaflets bluntish, round; corolla pale flesh-colour, standard red; plant not very

different from the last. July, August. South of Europe. 1710. A.

6. *L. Angustifolius*. *Narrow-leaved blue Lupine*. "Calyxes alternate, with appendages, upper lip cleft, lower lip entire;" leaves digitate; leaflets linear, lanceolate, flat, blunt, commonly nine; flowers blue; seeds small. July, August. Spain. 1686. A.

7. *L. Lu'teus*. *Yellow Lupine*. "Calyxes in whorls, with appendages, upper lip two-parted, lower lip three toothed;" leaves digitate; leaflets seven to nine, narrow, hairy; flowers yellow, sweet, in whorled spikes. July, August. Sicily. 1596. A.

The plants of this genus have been long and well known. The second species is cultivated in the South of Europe to enrich the ground, it being ploughed in, just after flowering; the seeds are used in Italy for food, being first boiled, and afterwards steeped in water, to extract the bitterness.

VII. *ANTHYLLIS*, from ἄνθος, a flower, and ἄλος, the first down on the chin; the plant being downy. Nat. ord. *Linn. Papilionaceæ. Juss. Leguminosæ.*
21 Species.

1. *A. Tetraphylia*. *Four-leaved Kidney Vetch, or Anthyllis*. "Leaves pinnate, with four leaflets; flowers lateral;" branches trailing, spreading flat on the ground; flowers in clusters; calyxes large, swelling; flowers small yellow. July, August. South of Europe. 1640. A.

2. *A. Vulneraria*. *Common Kidney Vetch, or La-*

dles' Finger. "Herbaceous; leaves pinnate, unequal; heads of flowers double; leaflets five or six pairs; pubescent;" flowers sessile, about twenty in a head; stems decumbent; flowers golden, sometimes scarlet; calyx whitish. May to August. Britain. P.

3. A. Monta'na. *Mountain Kidney Vetch.* "Herbaceous; leaves pinnate, equal; head of flowers terminal, leaning one way; flowers oblique;" stems four to six inches high; flowers pale, streaked with deep purple; leaflets silky, from ten to twenty pairs. June, July. South of Europe. 1759. P.

4. A. Cornici'na. *Horny Kidney Vetch.* "Herbaceous; leaves pinnate, unequal; heads solitary, on long stalks; legumes obtuse, hooked, shorter than the calyx;" stems round, hairy, prostrate; leaflets from five to seven pair; head of flowers leafy at the base; corolla pale yellow. July, August. Spain. 1759. A.

5. A. Loto'ides. *Lotus-like Kidney Vetch.* "Herbaceous; stem leaves ternate, root leaves pinnate, unequal, three cleft, and also simple;" stem procumbent, when in flower somewhat erect; leaves alternate, distant; leaflets ovate, villous, dark green, soft; calyx yellow, with a prismatic tube; flowers of a full sulphur colour, about nine in a head. June, July. Spain. 1739. A.

6. A. Bar'ba Jo'vis. *Silver-leaved Anthyllis, or Jupiter's Beard.* "Shrubby; leaves pinnate, equal,

silky, woolly; floral leaves equalling the many flowered globose head;" a shrub from ten to twelve feet high; flowers in small heads, of a bright yellow; pods short, woolly; leaflets very white, hairy. March to May. Spain. 1840. Gr. Ho. S.

A. Vulneraria has been recommended as an excellent pasture for sheep; the rest of these plants are seldom seen, except in botanic gardens: some shrubby tender species may be more frequently met with in green-houses.

VIII. U'LEX, from *uligo*, the natural moisture of the earth; it growing abundantly in most places. Nat. ord. *Linn.* Papilionaceæ. *Juss.* Leguminosæ.

2 Species.

1. U. Europæ'us. *Common Furze, Whin, or Gorse.* " Calyx teeth obsolete, converging; floral leaves ovate, lax; branches erect;" stems from two to six feet high; branches numerous, crowded, hairy, tipped with strong sharp permanent thorns, which bear at their base some awl-shaped leaves or flowers; flower-stalks axillary, or in pairs; calyx downy; corolla of a golden yellow, honey scented; legume downy, splitting with a crackling noise in hot still weather. April, May. Britain. E. S.

This well known plant is frequent on wastes and commons. It varies by cultivation, as the common yellow, the white flowered, the long spined, the short spined, the large French furze, the small or dwarf furze, the round podded furze. It is reported that when Linnaeus first saw

this plant blossoming most luxuriously on some heath, when he first visited England, he fell on his knees with admiration.

IX. *ONO'NIS*, from ὄνος, an ass, and ὕπει, to delight; asses being fond of it, Nat. ord. *Linn.* *Papilionaceæ.* *Juss.* *Leguminosæ.* 68 Species.

* *Flowers nearly sessile.*

1. *O. Antiquo'rūm.* *Rest Harrow of the Ancients.*
" Flowers solitary, larger than the leaflet; lower leaves ternate, lanceolate, toothed at the apex; branches smooth, thorny;" stems straight, hard, woody; flowers purple. June, July. South of Europe. 1791. P.

2. *O. Spino'sa.* *Thorny Rest Harrow, Cammock.*
" Flowers axillary, in pairs; leaves ternate, upper ones solitary; branches thorny, woolly;" stems woody, leafy, hairy, spinous when old; leaves alternate, wedge-shaped, roughish; stipules large, ovate; flowers slightly stalked, rose-coloured, or white. Some Botanists have made this plant, in its young state, without thorns, a different species, calling it *O. Arvensis*; as also a trailing variety, growing near the sea, *O. Repens*. June to August. Britain. P.

3. *O. Hirci'na.* *Stinking Rest Harrow.* " Flowers somewhat spiked, in pairs; lower leaves ternate, upper solitary, rather hairy; branches woolly;" stems trailing below, ascending in the upper part; leaves

ovate, acutely serrate, hairy beneath; stipules serrate; flowers on short stalks, of a beautiful red; the whole plant has a strong unpleasant smell. May to August. Germany. 1596. P.

4. *O. Colum'næ.* *Small flowered Rest Harrow.*
" Flowers lateral; leaves ternate, oblong, pubescent; stipules sword-shaped; calyx rough, longer than the corolla;" stems numerous, upright; leaves alternate, stalked, fringed; flowers small, yellow, solitary. June, July. Portugal. 1732. A.

5. *O. Alopecuroides.* *Fox-tail Rest Harrow.*
" Flowers lateral, somewhat spiked; leaves simple, ovate, obtuse; stipules dilated;" stems upright, a foot high; leaves single, sessile, ovate, upper leaves narrower; calyx hairy; flowers close together, rather large, purple. July, August. Sicily. 1696. A.

** *Flowers on downless or simple stalks.*

6. *O. Pubescens.* *Downy Rest Harrow.* " Flower-stalks very short; upper leaves simple; stipules ovate, lanceolate, entire; stem a foot high, branched, diffuse;" lower leaves ternate; leaflets ovate, obtuse, acutely serrate; flowers many together, chiefly towards the ends of the branches, purple. June to August. South of Europe. 1680. A.

7. *O. Cenisia.* *Narrow-leaved trailing Rest Harrow.* " Stalks single, flowered; leaves ternate, wedge-shaped; stipules serrate; stems prostrate;" three or four inches long, slightly branched, smooth;

flowers solitary, scored, purple. There is a species in Linnæus, *O. Reclinata*, which seems to be only a variety of this, with the leaves more rounded. June to August. Italy. 1750. P.

*** *Flowers on awned or bearded stalks.*

8. *O. Cherle'ri. Dwarf Rest Harrow.* "Stalks single flowered; leaves ternate, wedge-shaped, toothed at the end, viscid and hairy; calyx longer than the corolla;" stem procumbent, lax; leaves nearly sessile; stipules lanceolate, serrate; flowers axillary, erect, purple; legume nodding. June, July. South of Europe. 1771. P.

9. *O. Visco'sa. Clammy Rest Harrow.* "Stalks single, flowered, bearded, as long as the leaves; leaves simple, oblong, serrate, clammy, lower leaves ternate;" stems strong, a foot and a half high, branchy the whole length; flower-stalks axillary; flowers pale yellow, erect. July, August. South of France. 1759. A.

**** *Shrubby.*

10. *O. Frutico'sa. Shrubby Rest Harrow.* "Stalks about three flowered; leaves sessile, ternate, lanceolate, serrate; stipules sheathing;" stems about five feet. high, jointed, branched; leaves rather fleshy, smooth, shining; flowers on long stalks, panicled, large, lilac or rose coloured, sometimes white. May, June. South of France. 1680. S.

11. *O. Rotundifolia*. *Round-leaved Rest Harrow*.
 " Stalks about three flowered ; leaves ternate, roundish, toothed ; calyx of three floral leaves ;" stem round, scored, rather hairy, about two feet high ; leaves stalked, ternate, the end leaflet larger and rounder ; flowers large, handsome, on long stalks, rose-coloured ; a taller plant than the former, with wider leaves. May to July. Italy. 1570. S.

The two last species are ornamental shrubs, the remaining are seldom cultivated, unless in botanic gardens ; they have the name Rest Harrow from their long and tough roots, which impede the plough-share. *O. Spinosæ* is planted by the Dutch on their sea banks, for the purpose of arresting the fleeting sand.

X. COLUTE'A, κολουτα, is the name of a plant in Theophrastus ; its derivation unknown. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 13 Species.

1. *C. Arbores'cens*. *Common Bladder Senna*, " Leaves pinnate ; leaflets elliptic, inversely heart-shaped ; standard gibbous, shortened ;" a shrub twelve feet high ; stems several, woody ; leaves alternate ; leaflets nine or eleven, glaucous beneath ; flowers yellow, with a reddish curved line at the base of the standard ; bunch of three or four flowers ; legume closed at the tip. June to August. France. 1568. S.

2. *C. Cruen'ta*. *Oriental Bladder Senna*. " Leaves pinnate ; leaflets wedge-form, inversely heart-shaped ;

standard gibbous; obtuse, very small;" stem woody; branches seven or eight feet high; leaflets eleven or thirteen, small, smooth, glaucous; flowers deep red, with two spots on the standard; legume opening beneath the tip into a wide hole. June, July. The Levant. 1710. S.

3. C. Pocock'ii. *Pocock's Bladder Senna*. "Leaves pinnate; leaflets roundish, elliptic, obtuse, dagger-pointed; standard gibbous, lengthened, ascending;" a lower shrub than the preceding; branches slender, spreading; leaflets thirteen to fifteen, very small; flowers bright yellow; peduncles one or two flowered. May to October. The Levant. 1752. S.

4. C. Frutescens. *Scarlet Bladder Senna*. "Leaves pinnate; leaflets oblong, retuse, hoary beneath; branches silky, woolly;" a shrub from two to four feet high; branches erect; leaflets from twenty-one to twenty-five; flowers bright scarlet, large; peduncles axillary, from three to five flowered; legumes very large. June, July. The Cape. 1683. Gr. Ho. S.

This is a genus of handsome shrubs, of which the first species has been long cultivated in England; their chief mark of distinction is the undivided bladdery legume; they have obtained the name of Senna, from a certain general resemblance of the leaves to Cassia Senna, and they partake somewhat of the same cathartic quality; the seeds are emetic.

allusion to the shape of the pod when a little curved.

Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ.

24 Species.

1. *P. Vulga'ris. Common Kidney Bean, French Bean.* "Stem twining; clusters solitary, shorter than the leaves; flower-stalks in pairs; floral leaves spreading, larger than the calyx; legumes pendulous;" leaves ternate, on longish stalks; leaflets broad, ovate, inclining to square; flowers four or six in each cluster; corolla pale, blueish white; seeds several, kidney-shaped, white, black, blue, red, and spotted. June to September. India. 1597. A.

2. *P. Multiflo'rus. Scarlet Kidney Bean.* "Stem twining; clusters solitary, about equal to the leaves, many flowered: flower-stalks in pairs; floral leaves close pressed, smaller than the calyx; legumes pendulous;" leaves ternate, smaller than the last; stems ten or twelve feet high; flowers scarlet, sometimes pink or white; pods large, rough; seeds purple, marked with black, sometimes pure white. This was formerly esteemed a variety only of the preceding species; its chief distinctions are the smaller floral leaves, and the much more numerous cluster of flowers on each peduncle. July to September. Perhaps South America. 1633. A.

3. *P. Inamæ'nus. Green flowered Kidney Bean.* "Stems twining; standard of the flower rolling back, hairy; the same colour as the calyx; leaves ternate; leaflets oblong, pointed;" flowers small, very pecu-

cular, from their green standard, not very handsome; legume scimitar-shaped; seeds speckled with red. July, August. Africa. 1794. A.

The first species is cultivated throughout Europe, for the sake of its young legumes, or pods, which are boiled for the use of the table; and are so much esteemed in England, as to be thought worthy of forcing; in the South of Europe, and especially in France, the beans themselves are valued as an ingredient in soup and other made dishes, for which purpose those with a white skin are preferred. The pods of the Scarlet Bean are thought of a less delicate flavour, but its beautiful scarlet blossoms, ample foliage, and long twisted stems, secure it a place in every cottage garden and bower. The gardener's varieties of the cultivated French Bean are numerous.

XII. O'ROBUS, from ὄρευ, to excite, and βοῦς, an ox, being used to fatten cattle. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 13 Species.

1. O. Lathyroi'des. *Upright Blue Bitter Vetch.* "Leaves in pairs, elliptical, nearly sessile; stipules toothed;" stems upright, simple, leafy, a foot and a half high; leaves alternate, of two light green veined leaflets; flower-stalks axillary, solitary, shorter than the leaves, bearing a cluster of eight or ten inodorous but handsome flowers, turned one way, blue, with darker veins; calyx purplish, slightly hairy. June. Siberia. 1758. P.

2. O. Lu'teus. *Yellow Bitter Vetch.* "Leaves

pinnate, with four or five pair of elliptic lanceolate leaflets; stipules half arrow-shaped, toothed;" stems numerous, two or three feet high, sometimes simple, but often branched, leafy, angular; flower-stalks longer than the leaves, bearing from six to ten large drooping flowers, tinged with various shades of pale yellow and buff. June, July. Italy. 1759. P.

3. O. Ver'nis. *Spring Bitter Vetch.* "Leaves pinnate, with about three pair of ovate pointed leaflets; stipules half arrow-shaped, entire; stem simple;" leaves broad, bright green; flowers copious, showy, variegated with crimson and blue; stem about a foot high, elbowed at each insertion of the leaves. March, April. Europe. 1629. P.

4. O. Tubero'sus. *Common Bitter Vetch, or Heath Pea.* "Leaves pinnate, with about three pair of elliptic lanceolate leaflets; stipules half arrow-shaped, toothed at the base; stem winged," a foot high; leaflets dark green, sometimes nearly linear; flowers in clusters, large, handsome; standard purple; wings paler; calyx brown. May, June. Britain. P.

5. O. Va'rius. *Parti-coloured Bitter Vetch.* "Leaves pinnate, with about four pair of linear lanceolate leaflets; stipules half arrow-shaped, entire; stem winged, branched above;" flowers about six in a cluster; calyx red; standard crimson, fading to a pale yellow; wings and keel variegated with yellow and buff. May, June. Italy. 1759. P.

6. *O. Ni'ger*. *Black Bitter Vetch*. "Stem branched; leaves pinnate, with about six pair of ovate smooth leaflets;" stem erect, angular, two or three feet high; leaves many; clusters shortish, with four or six dull purple flowers; peduncle longer than the leaves. June, July. Europe. 1596. P.

7. *O. Sylva'ticus*. *Tufted Wood Bitter Vetch*. "Stems branched, decumbent, hairy; leaves pinnate, with numerous, ovate, lanceolate, hairy leaflets; stipules half arrow-shaped; legume ovate;" stems numerous, angular, prostrate; flowers many in each cluster, pale buff, veined with purple. May to July. Britain. P.

This is a very handsome genus of papilionaceous plants, forming ornaments for clumps or borders; they all partake of a certain elegance of form, with a variegation of colour.

XIII. PI'SUM, from πισον, to bruise, the ancients being accustomed to pound or grind their legumes. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ.
4 Species.

1. *P. Sati'vum*. *Common Pea*. "Foot-stalks cylindrical; stipules rounded and crenate at the base; stalks bearing several flowers;" stem branched, leafy, smooth, climbing by means of tendrils; leaves alternate, pinnate, of about six elliptic nearly opposite leaflets, and ending in a tendril; stipules in pairs,

larger than the leaflets, rounded, crenate; flowers white, inodorous; seeds five to nine, white, yellow, blue, grey, greenish, and brown. The varieties are several:

1. *Green Rounival*, with the ripe pea of a green colour. 2. *Sugar Pea*, with the legume having no lining, so that the pods may be boiled and eaten entire. 3. The *Crown or Rose Pea*, which may also be eaten entire; the wings of this are rose-coloured. June to September. South of Europe. A.

2. *P. Arven'se. Field or Grey Pea.* "Leaves pinnate; leaflets four on a stalk; stipules strongly crenate; stalks single flowered;" scarcely more than a variety of the last, or perhaps its original state; leaflets fewer, more frequently serrate; flowers solitary, purplish; wings of a violet purple; stipules often angular. June to September. Europe. A.

3. *P. Mari'timum. Sea Pea.* "Foot-stalks slightly flattened above; stem angular; stipules arrow-shaped; stalks many flowered;" stems short, procumbent, thickly clothed with grey glaucous leaves, ending in a tendril; leaflets six or eight, oval, alternate; flowers handsome, variegated with purple and blue; legume linear, oblong, the seeds about as good as the Grey Pea. July. England. P.

4. *P. O'chrys. Yellow-flowered Pea.* "Leaflets two, on winged decurrent foot-stalks; flower-stalks single flowered;" between the leaflets a many branched tendril, winged at the base; flower-stalks axillary,

solitary ; corolla pale buff ; legume channelled, winged at the back. June, July. South of Europe.

1633. A.

Like all plants much cultivated, the gardener's varieties of this excellent pulse are very numerous. The Hotspurs and Hastings are so called from their bearing early in the season, and are of low growth. The Marrowfat, Sugar Pea, Crown Pea, &c. are later and loftier plants. All these varieties degenerate without the greatest care ; they all require the assistance of supporting sticks. In field culture the varieties are equally numerous, and the plants trail on the ground ; from them are obtained that vast supply required for the use of the navy : the second species is cultivated for the purpose of feeding hogs, upon which they thrive remarkably well.

XIV. LA'THYRUS, from λαθύν, to lie hidden, the leaves of some species closing in the evening, and concealing the flowers. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 36 Species.

* Stalks single flowered.

1. L. A'phaca. *Yellow Lathyrus, or Vetchling.* " Flowers solitary ; tendrils leafless ; stipules between heart and arrow-shaped," large ; stem weak, a foot or two high, supported by numerous tendrils ; leaves none ; flowers yellow. June, July. England. A.

2. L. Nisso'lia. *Crimson Lathyrus, or Grass Vetch.* " Peduncles mostly one flowered ; leaves simple ; stipules awl-shaped :" plant grass like ; stem two feet high ; flower crimson. May. England. A.

3. L. Amphicarpos. *Subterranean Lathyrus, or Earth Pea.* "Stalks single flowered, longer than the calyx; tendrils two leaved, quite simple;" leaflets linear, lanceolate, glaucous, in pairs, with half arrow-shaped stipules; flowers large, solitary, dull purple: a plant remarkable for producing many of its pods with perfect seeds under ground, from the subterraneous part of the stem. June, July. The Levant. 1680. A.

4. L. Cicera. *Flat-podded Lathyrus, or Dwarf Chickling Vetch.* "Stalks one flowered; tendrils two leaved; legumes ovate, compressed, channelled on the back;" stems several, a foot and a half high, angular, winged, procumbent; leaves linear, in pairs; stipules lanceolate, toothed; flowers white or pale yellow, red and white, or deep purple, seldom blue. June, July. France. 1638. A.

5. L. Sativum. *Common Lathyrus, or Blue Chickling Vetch.* "Stalks one flowered; tendrils two or four leaved; legumes ovate, compressed, two edged at the back;" leaves and stipules longer and narrower than the last; flower larger, white, sometimes tinged with purple; standard rose-coloured or blue; legume short, broad, winged on the back. Bread has been made from the seeds, but it has produced most dreadful consequences, affecting the muscles with a surprising rigidity, which no remedy has relieved. Swine and even pigeons by feeding on the seed have experienced somewhat similar effects, yet mixed with wheat

flour it appears to be harmless. June, July. Spain.
1640. A.

6. L. Inconspicuous. *Small-flowered Lathyrus.* "Stalks one flowered, shorter than the calyx; tendrils two leaved, simple; leaflets lanceolate;" stems a span high, obscurely triangular; stipules lanceolate, with an acute tooth behind; leaflets scored beneath; corolla reddish; keel paler. July, August. The Levant. 1739. A.

7. L. Setifolius. *Bristle-leaved Lathyrus.* "Stalks one flowered; tendrils two leaved; leaflets bristly, linear;" stems one or two, procumbent, almost naked; stipules linear; flowers bright scarlet; legume somewhat ovate, turgid. June, July. South of France. 1739. A.

8. L. Articulatus. *Joint-podded Lathyrus.* "Stalks one or two flowered; tendrils accompanied by many alternate lanceolate leaflets, on a winged stalk;" standard bright red, with white wings and keel; legume oblong, narrow; seeds four. July, August. South of Europe. 1640. A.

** *Stalks two flowered.*

9. L. Odoratus. *Sweet Pea.* "Stalks two flowered; tendrils two leaved; leaflets ovate, oblong; legumes hairy;" stem rising by its claspers or tendrils to three or four feet; flower-stalks axillary, six inches long, sustaining two large flowers, sweet scented, if more than two the uppermost are commonly blighted,

a brown spot; flowers crowded, dull purplish blue. May, June. Britain. P.

13. V. Platycarpos. *Flat-podded Vetch.* "Legume solitary, nearly sessile, compressed, somewhat inflated; leaflets ovate, toothed at the end; stipule with fringe-like teeth;" stem a foot and a half high, thick, angular, hollow, a little hairy; leaflets four, with a long branching tendril; stipules broad; flowers purple; seeds the size of peas, of a strong disagreeable taste, black. July, August. Germany. 1723. A.

14. V. Narbonensis. *Broad-leaved Narbonne Vetch.* "Legumes about three together, nearly sessile, compressed; leaflets ovate, obtuse, entire; stipules fringed, toothed at the base;" leaflets one or two pair, with a divided tendril; flowers dark purple; legume oblong, rather hairy. June, July. France.

1596. A.

15. V. Serratifolia. *Saw-leaved Vetch.* "Legumes about three together, nearly sessile, fringed; leaflets elliptic, obtuse, serrate throughout, as well as the stipules;" leaflets four pairs, with a branched tendril; flowers three or four on a very short stalk, dark purple; legume compressed; seeds seven or eight, globular. June, July. Hungary. 1723. A.

16. V. Fa'ba. *Common Garden Bean.* "Stalks with several flowers, very short; legumes ascending, tumid, leathery; leaflets elliptic, acute, entire; tendril abortive; stipules half arrow-shaped, toothed at

the base;" stem from three to five feet high; leaflets smooth; flowers from six to ten, fragrant, white with a broad black spot on each wing; calyx whitish; legume large, thick, oblong, pulpy while unripe, with four or five seeds. Var. 1. The *Horse Bean*, with a smaller pod and roundish seeds. June, July: Egypt. A.

This genus is nearly allied to the last, but it differs essentially in the stigma; the plants are of a more slender habit, with smaller more oblong flowers. *V. Sativa* is much cultivated under the names of Vetches or Tares, as green fodder for horses: the seeds are excellent for pigeons. *V. Ervilia* is cultivated on the Continent for the same purposes, but has no superior qualities to obtain a preference here. The rest of this Vetch tribe are not commonly met with unless in very extensive and diversified gardens. Some other English species, not enumerated with the above, are found in hedges, and are but little regarded. The Garden Bean, like other esculents, has many varieties, such as the Mazagan, an early bearer, the Lisbon, the Spanish, the Sandwich, and the Windsor Bean, all excellent for the table, particularly the last. The Horse Bean, which is cultivated in fields, has also two or three varieties: that called Tick Bean, a lowish plant, and a great bearer, is much in favour; this sort is used as food for horses, and for fattening hogs, formerly it was much brought up at Bristol, for the Guinea ships, as food for the Negroes, in their passage from Africa to the West Indies.

XVI. ASTRA'GALUS, from αστραγαλος, a squarish bone of the foot, which the seeds of this plant were

thought to resemble. Nat. ord. *Linn.* Papilionaceæ.
Juss. Leguminosæ. 174 Species.

* *Stems leafy, erect; flowers axillary.*

1. A. *Christia'nus.* *Great Yellow Milk Vetch.*
" Stem erect; leaflets elliptic, stalked; stipules linear, awl-shaped; peduncles three flowered, axillary, crowded; legumes oblong, compressed, pubescent;" stems about three feet high; leaves very long, forming a sort of pyramid; flowers bright yellow; seeds yellow, square. July. Armenia. 1737. P.

** *Stems leafy, erect; spikes cylindrical, axillary, somewhat sessile.*

2. A. *Alopecuroïdes.* *Fox-tail Milk Vetch.*
" Stem erect; stipules ovate; spikes cylindrical, nearly sessile; calyx and legumes woolly;" stem hairy, about two feet high; leaves pinnate; leaflets ovate, in eighteen or twenty pairs; flowers yellow, in close spikes; legumes containing three or four square seeds in each cell. June, July. Spain. 1737. P.

*** *Stems leafy, erect; spikes or clusters stalked.*

3. A. *Pilosus.* *Pale-flowered Milk Vetch.* " Stem erect, hairy; flowers in spikes; legumes awl-shaped, hairy;" stem more than a foot high, round, hard, branching; leaflets ten or twelve pairs, elliptic, lanceolate, hairy; flowers stalked, about fifteen, yellow. June to August. Germany. 1732. P.

4. A. Sulcatus. *Furrowed Milk Vetch.* "Stem erect, smooth, scored, stiff; leaflets linear, lanceolate, acute; legumes three sided;" stems three feet high; leaflets about nine pairs, with an odd one, smooth, oblong; flower-stalks in clusters, supporting many erect pale violet flowers; legumes smooth; seeds brown, kidney-shaped. July. Siberia. 1785. P.

5. A. Asper. *Rough Astracan Milk Vetch.* "Stem stiff, even, roughish; flowers in spikes, on long foot-stalks; legumes oblong;" stems two feet high, round, streaked, leafy, branched; leaflets about ten pair, linear, acute; spikes long, with pale flowers: whole plant rough, somewhat hoary. July, August. Astracan. 1796. P.

6. A. Galegiformis. *Goat's Rue-leaved Milk Vetch.* "Stem stiff, smooth; flowers in clusters, pendulous; legumes three sided, pointed at both ends;" stems five feet high; leaflets twelve or fourteen pair, oval, with an odd one; flower-stalks axillary; flowers yellow. June to August. Siberia. 1759. P.

7. A. Tenuifolius. *Fine-leaved Milk Vetch.* "Stem erect; spikes stalked; standard of the corolla twice as long as the wings; leaflets linear," from eleven to thirteen, rather woolly; flower-stalks long, straight, obtusely triangular; flowers reddish, rather large. July, August. Siberia. 1780. P.

8. A. Virescens. *Green-flowered Milk Vetch.* "Stem erect, smooth; leaflets lanceolate, acute;

clusters longer than the leaf; legumes compressed, three sided, sickle-form, acute, pendulous;" corolla greenish white. June, July. Siberia. 1737. P.

9. A. Capitatus. *Round-headed Milk Vetch.* "Stem erect; heads of flowers globular; peduncles very long; leaflets notched;" stems several; flower-stalks axillary; flowers purple. July, August. The Levant. 1759. P.

10. A. Uliginosus. *Marsh Milk Vetch.* "Stem nearly erect; leaflets oblong, pubescent; spikes stalked; floral leaves oblong, the length of the calyx; legumes oblong, tumid, recurved, pointed;" flowers violet-coloured. June to August. Siberia. 1752. P.

11. A. Carolinianus. *Carolina Milk Vetch.* "Stem erect; leaflets oblong, downy beneath; spikes of flowers stalked; floral leaves lanceolate, the length of the flower-stalk; legumes ovate, tumid, beaked;" stems three feet high; leaflets eighteen or twenty pair; flowers of a greenish yellow. July, August. North America. 1732. P.

**** *Stems leafy, diffuse.*

12. A. Canaden sis. *Woolly Milk Vetch.* "Stems diffuse; legumes nearly cylindrical, dagger pointed; leaflets almost naked;" stems round, about two feet high; leaflets ten pair, smooth on both sides, rather glaucous beneath; flower-stalks axillary, streaked; flowers yellow; legume oblong, concave, flattened. June, July. North America. 1732. P.

13. A. Cicer. *Bladdered Milk Vetch.* "Stems prostrate; legumes nearly globular, inflated, dagger pointed, hairy;" stems eighteen inches high, very much branched; leaflets twelve or fifteen pair, oval, hairy; stalks axillary, supporting spikes of twenty or more pale yellow flowers; legumes completely two celled, with many seeds. June, July. Italy. 1570. P.

14. A. Glycyphyl'los. *Sweet Milk Vetch, Wild Liquorice.* "Stems prostrate; leaflets smooth, ovate, obtuse, dagger pointed; stipules egg lance-shaped; clusters stalked, shorter than the leaf; legumes bowed, somewhat three sided;" stems flexuose, a little hairy; leaflets from four to six pair; flowers greenish yellow, from twenty to thirty in a cluster. June, July. Britain. P.

15. A. Microphy'l'us. *Small-leaved Milk Vetch.* "Stem flexuose; leaflets ovate, somewhat hairy; stipules solitary, with opposite two parted leaves; spikes stalked, longer than the leaf; legumes somewhat cylindrical, inflated, woolly;" stem a foot high, with spreading branches; leaflets thirteen or fifteen pair, blunt; peduncles solitary, with horizontal yellow flowers, twice the length of the calyx. June, July. Siberia. 1773. P.

16. A. Trimes'tris. *Egyptian Milk Vetch.* "Stalks mostly two flowered; legumes hooked, awl-shaped, two keeled;" stems six or seven inches high, hairy, reddish; flower-stalk sometimes appearing before the

stems; leaflets about eleven pair, oblong, notched; stalks with three or four spreading pale yellow flowers. June, July. Egypt. 1739. A.

17. A. Hamo'sus. *Hook-podded Milk Vetch.* "Stems procumbent; legumes awl-shaped, recurved, smooth; leaflets inversely heart-shaped, woolly underneath;" branches scored, and trailing on the ground; leaflets eight pair; flower-stalks axillary, terminated with a few pale yellow flowers; seeds square, a row in each cell of the legume. June, July. Spain. 1633. A.

18. A. Bœ'ticus. *Triangular-podded Milk Vetch.* "Stems procumbent; spike stalked; legume prismatic, straight, three sided, hooked at the top;" branches trailing, near two feet long; leaflets about ten pair, blunt; foot-stalks axillary, supporting four or five yellow flowers. June, July. South of Europe. 1759. A.

19. A. Stel'la. *Star-podded Milk Vetch.* "Stems diffuse; heads of flowers stalked, lateral; legumes straight, awl-shaped, dagger-pointed;" stem spreading, a foot long, scored, hispid with white crowded hairs; branches numerous; leaflets nine on each side, ovate; peduncles supporting about fifteen blueish flowers; legumes hairy, furrowed on each side. July, August. South of Europe. 1658. A.

20. A. Sesame'us. *Sesama Milk Vetch.* "Stems diffuse; heads of flowers somewhat sessile, lateral;

legumes awl-shaped, reflected at the point;" stems weak; leaflets ten pair, hairy; flowers small, copper-colour. June, July. France. 1616. A.

21. A. Pentaglot'tis. *Rough Spanish Milk Vetch.* "Stems procumbent; flowers in heads, shorter than the leaf; leaflets oblong, blunt; legumes compressed, three sided, acute, scaly;" leaflets fifteen, downy beneath; leaf-stalks hairy; stipules ovate; flower-stalks axillary, decumbent, hairy; flowers about five in a head, purplish; legumes bent in, warty, hooked at the top. June, July. Spain. 1739. A.

22. A. Epiglot'tis. *Heart-podded Milk Vetch.* "Stem procumbent; leaflets linear, attenuated at the base; heads of flowers nearly sessile; legumes half ovate, pointed, compressed, reflected, pubescent;" branches from the root three, hairy; leaflets about twelve pair, blunt; peduncles axillary, naked, terminated by a rough head of large deep purple flowers. June, July. South of Europe. 1757. A.

23. A. Hypoglot'tis. *Purple Mountain Milk Vetch.* "Stem procumbent; leaflets oblong, obtuse; spikes ovate; stalk longer than the leaf; legumes erect, ovate, channelled; hairy," hooked at the end; stems flexuose, about three inches high; leaflets small, numerous, ovate, hairy beneath; flowers purple, variegated with white; calyx rough, warty, black. June, July. England. P.

24. A. Austri'acus. *Austrian Milk Vetch.* "Stem prostrate; leaflets linear, lopped, notched; flower-

stalks longer than the leaf; legume three sided, lanceolate, pendulous," from seven inches to a foot high; stipules semi-ovate, entire; leaflets about eight pair; flowers in clusters, blueish, small. June, July. Austria.

1640. P.

25. A. Depressus. *Dwarf White-flowered Milk Vetch.* "Stems procumbent; leaflets obovate; clusters shorter than the leaf-stalk; legumes cylindric, lanceolate, reflexed;" branches short, pressed close to the ground; stalks with about seven flowers, small and white; keel purple at the tip; leaflets fifteen or seventeen. May, June. Europe. 1772.

26. A. Glaux. *Small Spanish Milk Vetch.* "Stem diffuse; heads of flowers on stalks, tiled, ovate; flowers erect; legumes callous, ovate, inflated;" stems seven inches long, woolly towards the top; leaflets about twenty, small, oblong, with white scattered hairs beneath; head of flowers like that of the Trefoils. June, July. Spain. 1596. A.

27. A. Sinicus. *Procumbent Chinese Milk Vetch.* "Stems prostrate; umbels stalked; legumes prismatic, awl-shaped at the tip;" stems spreading on the ground; leaflets seven or nine, roundish; flowers purplish; wings white; keel purple. July, August. China. 1763. A.

28. A. Onobrychis. *Purple-spiked Milk Vetch.* "Stem diffuse, spiked, stalked; standard twice as long as the wings; leaflets linear;" stems branching, streaked; leaflets twelve pairs, linear, frequently be-

coming ternate; flower-stalks furrowed, stiff, longer than the leaves; corolla red; plant sprinkled with white and black hairs. June, July. Austria. 1640. P.

29. A. Alpi'nus. *Alpine Milk Vetch.* " Stem procumbent; flowers pendulous, in clusters; legumes acute at both ends, hairy;" stems a foot high; leaflets about ten pair, ovate; stipules very short, white; flowers twelve or fifteen, in umbels, white; calyx rough with black hairs; legume rough, black, inflated, crooked. June, July. The Alps. 1771. P.

***** *Without a leafy-stem; flower-stalk naked.*

30. A. Monta'nus. *Mountain Milk Vetch.* " Nearly stemless; flower-stalks longer than the leaf; flowers loosely spiked, erect; legumes ovate, with an inflated point;" whole plant slightly woolly; stipules oblong, imbricate; leaflets lanceolate, pointed, rounded at the base, not more than fourteen; flowers blue or red, from eight to ten. July, August. The Alps. 1581. P.

31. A. Physo'des. *Inflated Yellow Milk Vetch.* " Stemless; leaflets ovate, glaucous; flower-stalks longer than the leaf; flowers in heads; legumes inflated, globose, membranous, smooth;" flowers yellow; seeds greenish; floral leaves woolly. June, July. Siberia. 1759. P.

32. A. Capri'nus. *Scented Milk Vetch.* " Stemless; leaflets ovate, oblong, acute, hairy; flower-stalk doubly longer than the leaf; legumes ovate,

tumid, woolly ;" leaflets from fifteen to twenty pair, fringed at the edges ; peduncles a foot long, spiked : flowers many, pale yellow ; legumes thick, three sided. June, July. Barbary. 1683. P.

33. A. Uralen'sis. *Hairy Mountain Milk Vetch.* " Stemless ; flower-stalk erect, longer than the leaves ; legumes oblong, inflated, woolly, erect ;" stalk soft and downy ; leaves all radical, with ten or twelve pair of oval leaflets ; flowers pale violet, eight or ten in a short thick spike : whole plant silky. May to August. Scotland. P.

34. A. Monspessula'nus. *Montpelier Milk Vetch.* " Stemless ; flower-stalks as long as the leaves, declining ; legumes awl-shaped, round, rather bowed, smooth ;" leaflets ovate, from ten to twenty pair ; scape simple, bearing a cluster of nearly thirty purple flowers. July, August. France. 1710. P.

35. A. Campes'tris. *Field Milk Vetch.* " Stemless ; calyxes and legumes woolly ; leaflets lanceolate, acute ; flower-stalk decumbent ;" runners about half an inch long ; leaflets about fifteen pair, hairy, shining ; scape bearing ten or twelve flowers in a loose cluster ; corolla pale yellow. June, July. Switzerland. 1778. P.

36. A. Exscap'pus. *Hairy-podded Hungarian Milk Vetch.* " Stemless ; legumes woolly, oblong ; leaflets oblong, obtuse, hairy ; flowers aggregate, nearly sessile ; calyxes with close pressed hairs ;" leaflets from twenty to thirty ; flowers numerous, yellow. May to July. Hungary. 1787. P.

***** *Stems woody.*

37. A. *Tragacan'tha*. *Goat's Thorn Milk Vetch*. "Shrubby; leaf-stalks becoming spinous;" stems a foot high, leafy, branching; leaflets about ten pair, small, ovate, greyish; floral leaves ovate, lanceolate; flowers erect, four or five in a cluster; standard and wings yellowish white; keel purple. There is a variety with leaflets broader, flowers fewer, stem lower. May to July. South of Europe. 1640. S.

None of the plants of this vast and overwhelming genus are very common in English gardens, or particularly remarkable for their beauty or fragrance, and but few possess any interesting property. A. *Cicer* has been recommended to be cultivated as food for cattle. A decoction of the root of A. *Exscapus* is considered as of great use in restoring a vitiated habit of body, but the most valuable species is the A. *Tragacantha*, from whose stem and branches exudes the Gum Tragacanth, which dries in the sun, and is collected by the shepherds of Mount Ida; it is also produced in the southern parts of Europe: this gum is a mild emollient, and is of much service in alleviating acrid and irritating symptoms.

XVII. BISER'RULA, so named from the seed vessel being serrate on both sides. Nat. ord. *Linn.* *Papilionaceæ*. *Juss.* *Leguminosæ*. 1 Species.

1. B. *Peleci'nus*. *Bastard Hatchet Vetch*. Stems many, angular, trailing on the ground, much subdivided; leaves winged; leaflets many paired, with an odd one, heart-shaped; flower-stalks sustaining

several small purplish flowers ; legume oblong, serrate on both edges. July, August. South of Europe. 1640. A.

XVIII. PHA'CA, from the φάκος of Dioscorides, but which name is supposed in that author to mean the Lentil. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 11 Species.

1. P. Bœ'tica. *Hairy Bastard Vetch.* " Hairy ; stem erect ; leaves pinnate ; leaflets numerous, oval ; stipules linear, lanceolate ; legume oblong, boat-shaped, somewhat depressed ;" stem erect, herbaceous, two feet high, leafy, slightly angular, a little zigzag, reddish ; the whole plant clothed with soft hairs ; leaves alternate ; leaflets nine pair ; flowers copious, large, handsome, pure white, pendulous, in long, stalked, upright clusters. July. Spain. 1640. P.

2. P. Alpi'na. *Alpine Bastard Vetch.* " Erect, branched, somewhat hairy ; leaves pinnate ; leaflets many paired, egg lance-shaped, obtuse ; legumes half ovate, acute ;" stems about two feet high, branched, leafy ; leaves alternate ; leaflets from ten to fourteen pair ; stipules linear ; flowers yellow, in thickish long stalked clusters. July. Siberia. 1759. P.

3. P. Austra'lis. *Cloven-winged Bastard Vetch.* " Stems decumbent, branched ; leaves pinnate ; leaflets eight pair, elliptic, lanceolate, smooth above ; wings of the corolla cloven at the extremity ;" stems several, smooth ; leaflets hairy beneath ; flowers

white, the keel tipped with purple; legumes pendulous, oblong, smooth. May, June. South of Europe. 1779. P.

XIX. TRIFO'LIUM, from τριψ, three, and φυλλος, a leaf. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 72 Species.

* Meliloti. *Legumes projecting beyond the calyx, many seeded; flowers racemose or in clusters.*

1. T. Cæru'leum. *Blue Melilot Trefoil.* "Clusters roundish, ovate, long-stalked; legumes half naked, beaked, with slight longitudinal ribs, and two seeds;" stem erect; stipules entire; stem two or three feet high, smooth, angular, leafy, scarcely branched; leaflets pale, elliptic; flowers pale blue, in axillary heads all the way up the stem. August, September. Germany. 1562. A.

2. T. In'dieum. *Indian Melilot Trefoil.* "Clusters cylindrical; legumes naked, strongly veined, single seeded, obtuse; stem erect; stipules entire;" flowers in long slender clusters, drooping, small, yellow: legumes not bigger than mustard seed. June to August. India. 1680. A.

3. T. Messanen'se. *Sicilian Melilot Trefoil.* "Clusters shorter than the leaves; legumes naked, ovate, pointed, with crowded ribs, single seeded; stems procumbent," stout, smooth, leafy; clusters

axillary, of ten or twelve yellow flowers, twice as large as the last. June, August. Sicily. 1680. A.

4. T. Polo'nicum. *Polish Melilot Trefoil.* "Clusters lax, on long stalks; legumes naked, two seeded, lanceolate, pointed, wrinkled across; stem erect; leaflets pointed;" stem round, slender; leaves rather silky; flowers yellow, distant, small. June, August. Poland. 1778. A.

5. T. Officina'le. *Common Melilot Trefoil.* "Legumes clustered, naked, two seeded, somewhat wrinkled, ovate, acute, rather compressed; stipules awl-shaped; stem erect," branched, two or three feet high, angular, furrowed; flowers full yellow, veiny, in long dense clusters. July to September. Britain. A.

6. T. Italicum. *Italian Melilot Trefoil.* "Legumes clustered, naked, two seeded, elliptical, obtuse, strongly wrinkled and crisped; stem erect; leaflets roundish, obovate, nearly entire;" stem stout, angular, leafy; flowers yellow; clusters of legumes, when ripe, overtopping the stem, each as big as a small pea; stipules ovate, toothed. June to August. Italy. 1596. A.

7. T. Cre'ticum. *Cretan Melilot Trefoil.* "Legumes racemose, naked, two seeded, membranous, compressed, bordered, nearly round; stem ascending," branched twelve or eighteen inches high; leaflets broad, thick, fleshy; flowers pale yellow, in loose clusters. June to August. Crete. 1713. A.

8. T. Ornithopodioi'des. *Bird's Foot Melilot Trefoil.* "Legumes about three on a stalk, naked, eight seeded, twice the length of the calyx; stems procumbent," mostly simple, depressed, two or three inches long, clothed with little leaves; flowers slender, pale purple. June, July. Britain. A.

** Lotoidea. *Legumes many seeded, covered by the calyx.*

9. T. Lupinas'ter. *Bastard Lupine Trefoil.* "Heads of flowers hemispherical, leaflets quinate, or in fives, sessile; legume with many seeds;" stems about a foot high; leaflets lanceolate, smooth, veined; flowers crimson, occasionally white, numerous, handsome, their stalks directed one way, hairy, with a cup-like floral leaf. July, August. Siberia.
1741. P.

10. T. Re'pens. *Common White Trefoil, or Dutch Clover.* "Heads nearly globose; flowers stalked; legumes four-seeded; leaflets inversely heart-shaped, or roundish; stems creeping, solid, many flowered;" stems many, prostrate; stipules tubular; flowers white, brown in decay; legume oblong, smooth, with three or four seeds. May to September. Britain. P.

11. T. Alpi'num. *Alpine Trefoil.* "Heads hemispherical, somewhat clustered and whorled; flower-stalks naked, radical; legumes two-seeded, pendulous; leaflets linear, lanceolate;" flowers large, bright crimson, each an inch long, springing from dense

tufts of leaves; stem scarcely any. June to August.
The Alps. 1775. P.

*** *Lagopoda*. *Calyx more or less woolly*.

12. *T. Cherle'ri*. *Hairy Pink Trefoil*. "Heads terminal, solitary, globose; calyx very hairy, with taper teeth; involucre of three roundish leaves; stems procumbent, about four inches long;" leaflets inversely heart-shaped, with a dark purple mark; flowers numerous, in dense heads; corolla pale blush colour, with a long crimson standard. May, June. Montpelier. 1750. A.

13. *T. Lappa'ceum*. *Burr Trefoil*. "Heads globose, somewhat elliptical; calyx teeth awl-shaped, fringed, at length divaricated; stems much branched, spreading; leaflets obovate, toothed;" stems square, leafy, spreading, a foot high; calyx ribbed; corolla twice as long as the calyx, monopetalous, its tube or united claws white, wings pale, standard pink. June to August. Montpelier. 1787. A.

14. *T. Ru'bens*. *Red Long-spiked Trefoil*. "Spikes long and cylindrical; calyx teeth hairy, the lowermost as long as the monopetalous corolla; stipules sword-shaped, longer than the foot-stalk; leaflets lanceolate, sharply serrate; stem erect," one to two feet high; flowers crimson, in dense blunt spikes, two or three inches long. June to September. South of Europe. 1633. P.

15. *T. Praten'se*. *Common Purple Clover, Honey-*

suckle Trefoil. "Spikes ovate, dense; stems ascending; corolla monopetalous, unequal; four of the calyx teeth equal; stipules awned;" stems a foot high, slightly branched, leafy, solid, downy on the upper part; leaflets elliptic, with a crescent-shaped spot; spikes terminal, solitary, sessile, of numerous light purple flowers; calyx hairy, ten ribbed; legume single seeded. May to September. Britain. P.

16. T. Me'dium. *Zigzag Trefoil, or Bastard Clover.* "Spikes lax; stems zigzag, branched; corolla monopetalous, nearly equal; two upper calyx teeth shortest; stipules linear, taper pointed;" differs from the last in its zigzag more branched stem, with a thin pith; spikes more lax; leaflets elliptic, fringed; a plant of no value. June, July. England. P.

17. T. Panno'nicum. *Hungarian Trefoil, or Clover.* "Spikes dense, elliptic, oblong, solitary; calyx hairy, its lowest tooth longest; corolla monopetalous; standard long, linear, lanceolate; stipules with awl-shaped points; leaflets hairy, nearly entire, minutely pointed; stem erect;" spikes large, of innumerable cream-coloured flowers; corolla an inch and a quarter long. June, July. Hungary. 1752. P.

18. T. Incarna'tum. *Flesh-coloured Trefoil.* "Spikes cylindrical, obtuse, leafless, hairy; leaflets inversely heart-shaped, rounded, crenate, hairy; calyx teeth awl-shaped, nearly equal; stipules obtuse, wavy, red-veined;" spikes long, dense, of a rich

crimson; stem erect, nearly two feet high. July. Italy. 1598. A.

19. T. *Angustifo'lium*. *Narrow-leaved Trefoil*. "Spikes cylindrical, hairy; leaflets linear, pungent; calyx teeth bristle-shaped, the lowermost rather longest;" leaflets very long, narrow, grassy; corolla pink. June to August. South of France. 1640. A.

20. T. *Clypea'tum*. *Buckler-shaped Trefoil*. "Spikes terminal, ovate; calyx teeth ovate, leafy, very unequal, finally spreading, the lower one very large; stipules ovate;" leaflets roundish, obovate; flowers light pink or white; calyx after flowering forming a sort of five-angled shield, green and leafy. July, August. The Levant. 1711. A.

21. T. *Alexandri'num*. *Egyptian Trefoil*. "Heads ovate, on axillary stalks, longer than the leaves; calyx hairy, teeth awl-shaped, unequal; stem erect; floral leaves opposite; leaflets ovate, lanceolate, with shallow teeth;" stem a foot high, naked in the lower half, round, scored; leaflets somewhat downy; stipules oblong, veiny, with green awl-shaped points; heads solitary; corolla monopetalous, white; standard linear, obtuse. June, July. Egypt. 1798. A.

**** *Vesicaria*. *Bladder Trefoils; calyxes inflated, swelling after flowering*.

22. T. *Spumo'sum*. *Bladdery Trefoil*. "Heads of flowers ovate; calyx of the legume tumid, smooth,

with bristle-shaped recurved teeth; floral leaves membranous, lanceolate; stem and branches erect;" leaflets obovate, scored, marked with white; corolla long, slender, crimson, with a white tube; calyx flesh-coloured, tubular, veined; legume four seeded. June, July. France. 1771. A.

23. *T. Resupinatum*. *Reversed or Salamanca Trefoil*. "Heads of flowers roundish; flowers reversed; calyx of the legume inflated, oblong, membranous, veined, with two spinous teeth; stems prostrate;" leaflets obovate, ribbed, serrate; flowers crimson; legume two seeded. June, July. Germany. 1713. A.

24. *T. Tomentosum*. *Woolly Ball Trefoil*. "Heads of flowers globose; calyx of the legume inflated, globose, membranous, veined, densely woolly, with two minute teeth; stems prostrate;" leaflets obovate, bordered with minutely spinous teeth; calyx with pink veins; general involucre twelve-leaved; corolla almost reversed, reddish. June, July. South of Europe. 1640. A.

25. *T. Fragiferum*. *Strawberry-headed Trefoil*. "Heads roundish, on stalks, much longer than the leaves; calyx of the legume inflated, globose, membranous, veined, nearly smooth, with two curved teeth; stems creeping;" heads of flowers pink, resembling a Hautboy Strawberry; legumes two seeded; leaflets obovate. July, August. England. P.

***** *Lupulina. Hop Trefoils. Standard of the corolla inflected.*

26. T. Monta'num. *White Mountain Trefoil.*
" Spikes roundish; standard awl-shaped, shrivelling; stem erect; leaflets elliptical, with bristly teeth;" stems and leaf-stalks silky; corolla white; tube of the calyx pale; legume one seeded. July, August. Europe. 1786. P.

27. T. Specio'sum. *Large flowered Trefoil.*
" Spikes hemispherical; standard kidney-shaped, toothed, as well as the wings; stems zigzag, decumbent," much branched, and spreading, purplish; leaflets obovate, toothed, notched; stipules lanceolate; heads numerous; calyx short; standard of the corolla lilac, shrivelling; wings and keel yellow. June, July. Candia. 1752. P.

28. T. Spadi'ceum. *Bay-coloured Trefoil.* " Heads of flowers oval, nearly cylindrical; standard elliptical, deflexed, entire; three lower calyx teeth awl-shaped, hairy, two upper very short; leaflets all equally sessile; stem erect;" flowers yellow, changing to a rich dark snuff colour. June to August. Europe. 1778. A.

29. T. Procum'bens. *Hop Trefoil.* " Heads of flowers oval, many flowered; standard furrowed; stems procumbent; leaflets obovate; common foot-stalk lengthened at the base; heads of flowers half an inch long;" corolla lemon-coloured, changing to a

light tawny brown; stipule semi-ovate; legume small, elliptic, with one seed. June, July. Britain. A.

Of this numerous genus, the British species are eighteen, but few or none of them are admitted into gardens. *T. Officinale*, or Common Melilot, is a dangerous inmate of wheat fields, as a very small quantity of the seeds will poison the flavour of flour; but it has been cultivated as fodder for the use of cattle, more indeed in France than here. *T. Repens*, or White Dutch Clover, and *T. Pratense*, Common Purple Clover, are much in request for the same purpose: the former is sown with grass, and affords an admirable sward; the latter is sown either alone or with corn, to remain a year or longer after the corn is reaped, and is without question the most valuable of all the artificial grasses used in agriculture. *T. Procumbens*, or Hop Trefoil, is sown together with either of the two last; it flourishes on gravelly and poor soils. *T. Alexandrinum* is said to be the species universally cultivated in Egypt, and to be the principal fodder used in that country; it is sown at the receding of the Nile, in lands which have been overflowed by its waters: probably in the low oozy fen lands in England its culture might be highly eligible. The remaining species of the genus are but rarely seen, being chiefly preserved as curiosities in botanical gardens.

XX. GLYCRRHIZA, from γλυκύς, sweet, and ρίζα, a root. Nat. ord. *Linn.* Papilionaceæ. *Juss.* Leguminosæ. 6 Species.

1. *G. Echina'ta*. *Prickly headed Liquorice.* "Legumes prickly; flowers capitate; stipules lanceolate,

leaflets smooth, the terminal one nearly sessile;" root long; stems two or three feet high, leafy, scored; leaflets elliptic, entire, acute; flowers several, in axillary, solitary, stalked heads, dull purple. June to September. Italy. 1598. P.

2. G. Gla'bra. *Common Liquorice.* "Legumes smooth; flowers spiked; stipules scarcely discernible; leaflets blunt, the terminal one on a long stalk," large, glutinous beneath; flowers pale purple, on long axillary stalks; legumes oblong. July. South of Europe. 1562. P.

Liquorice is now planted for sale by many gardeners, in the vicinity of the metropolis; it has been long cultivated at Pontefract, in Yorkshire, and some few other places in England, the roots being esteemed better than those imported from Spain; a decoction of the root inspissated is well known as a useful demollient in catarrhal disorders.

XXI. HEDY'SARUM, from ηδύς, sweet, and ἄρωμα, a perfume; it giving out a pleasant scent. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 117 Species.

1. H. Marilan'dicum. *Maryland Hedysarum.* "Leaves ternate, oblong, woolly beneath; stipules awl-shaped; clusters panicled; legume three jointed; joints rhomb-shaped, veined, rather hairy;" stems about eighteen inches high, round, leafy; corolla purple, fading to blue; banner with a green keel at the base. July to October. North America. 1726. P.

2. H. Canaden'se. *Canadian Hedysarum*. "Leaves ternate, oblong, lanceolate; stipules thread-formed; flowers in clusters; joints of the legume obtusely triangular, hairy;" stem even, streaked, angular, upright. July, August. North America. 1640. P.

3. H. Viridiflo'rum. *Green flowered Hedysarum*. "Leaves ternate, ovate, oblong, rough beneath; stipules lance spear-shaped; clusters panicled with floral leaves; legumes rough;" flowers greenish. July to September. North America. 1787. P.

4. H. Frutes'cens. *Virginian shrubby Hedysarum*. "Leaves ternate, obtuse, silky beneath; stipules awl-shaped; clusters axillary, ovate, shorter than the leaf; legumes one jointed, hairy, shorter than the calyx;" stems two or three, shrubby, hairy, branching; flowers in short spikes, purplish yellow, and small. July, August. North America. 1739. S.

5. H. Viola'ceum. *Violet flowered Hedysarum*. "Leaves ternate, elliptic, obtuse; clusters umbellate, the length of the foot-stalk; flowers in pairs; legumes one jointed, rhomb-shaped, smooth, netted;" flowers violet-coloured; legume thrice as long as the calyx, sharp, smooth, one seeded. July, August. North America. 1787. P.

6. H. Volu'bile. *Twining Hedysarum*. "Leaves ternate, lanceolate, obtuse; stem twining; clusters axillary;" stems six feet or more high, slender, jointed; at each joint a leaf on a stalk; spikes of flowers axillary, on long smooth peduncles; flowers distant,

two or three together, purple, except the binder part of the standard, which is of a dun colour. July to September. North America. 1727. P.

7. *H. Argenteum*. *Silver-leaved Hedyarum*. "Stemless; leaves pinnate; leaflets somewhat roundish, silky, woolly beneath; legume jointed, wrinkled, woolly;" leaflets seven to nine, satiny; corolla showy, violet or white; legume two or three jointed; spike terminating. July, August. Siberia. 1796. (P.

8. *H. Fruticosum*. *Siberian shrubby Hedysarum*. "Shrubby; leaves pinnate; leaflets elliptic, obtuse, downy beneath, alternate; legumes jointed, veined;" leaflets nine to twelve, clusters few flowered, shorter than the leaves; corolla purple; legume flattened. June, July. Siberia. 1782. S.

9. *H. Obscurum*. *Creeping rooted Alpine Hedysarum*. "Stem upright, flexuose; leaves pinnate; leaflets ovate, smooth; clusters axillary; floral leaves longer than the flower-stalk; legumes pendulous, with smooth joints;" leaflets from three to eight pair, with an odd one; corolla violet, purple, or red, seldom white; standard spotted with white above the claw; legume commonly red. July, August. The Alps. 1840. P.

10. *H. Roseum*. *Rose-coloured Hedysarum*. "Stem upright; leaves pinnate; leaflets seven pair, elliptic; clusters headed, axillary, stalked, streaked, notched, longer than the keel," and paler; flowers red. July, August. Mount Caucasus. 1803. P.

11. *H. Coronarium*. *Common Hedysarum, French Honeysuckle.* "Stem diffuse; leaves pinnate; leaflets roundish, elliptic; legume with roundish joints, prickly, naked;" stems two or three feet high, hollow, branching; leaflets five or six pair, with an odd one; peduncles axillary, sustaining a spike of red flowers; legumes about three jointed. June, July. Italy. 1596. B.

12. *H. Hu'mile*. *Dwarf Hedysarum.* "Stem procumbent; leaves pinnate; leaflets linear, wedge-shaped; wings of the corolla very short; joints of the legume roundish, hairy, prickly;" stems half a foot long, with one branch and one leaf; leaflets woolly beneath; spike ovate; flowers red. July, August. Spain. 1640. A.

13. *H. Spinosis'simum*. *Thorny Spanish Hedysarum.* "Stems diffuse; leaves pinnate; leaflets ovate, notched; flowers cluster-headed; legume with round joints, woolly, prickly;" leaflets four or five pair, with an odd one; spikes terminal, small, purple. July, August. Spain. 1731. A.

14. *H. Onobry'chis*. *Saint Foin.* "Stem erect; leaves pinnate; leaflets wedge-shaped, smooth; wings of the corolla equal in length to the calyx; legumes one seeded, with prickly teeth;" stem decumbent, two or three feet long; leaflets eight or ten pair, rather distant, with an odd one, all with a point; flowers numerous, in a long spike, rose-coloured, with deeper lines. June, July. Britain. P.

15. H. Ca'put Galli. *Cock's Head Hedysarum.*
 " Stem erect; leaves pinnate, oblong, smooth; wings of the corolla shorter than the calyx; legumes one seeded, prickly; teeth of the calyx bristle-shaped, woolly;" flower-stalks very long; flowers in spikes, whitish; legume longer than the flower, spiny, one or two seeded. July, August. France. 1731. P.

16. H. Gy'rans. *Sensitive Hedysarum, or Moving Plant.* " Leaves ternate, oval, lanceolate, lateral; leaflets very minute; panicle terminating; legumes pendulous, compressed;" stem shrubby, three feet high, wand-like; leaves alternate, stalked, hanging down, or spreading; clusters of flowers terminal, axillary, many flowered; corolla brownish, with dusky streaks. July, August. East Indies. 1775. B. Hot Ho.

Our British species, Saint Foin, has been cultivated above one hundred and fifty years, as a favourite fodder for all sorts of cattle; it is a handsome plant, and delights in a poor, gravelly, or chalky soil. H. Fruticosum and H. Coronarium are also eaten by cattle, but are too tender for field cultivation in this climate. A large part of the plants of this very numerous genus are natives of the torrid zone, amongst which is the last species, H. Gyrans, one of the most singular plants in existence: the leaves having a peculiar and spontaneous motion; they are ternate; the middle leaflet is elliptic, about two or three inches in length; the two side leaflets are ovate, small, and narrow. It is these last which are endowed with a self-moving quality: they will sometimes move together from

a horizontal to an upright posture, or the reverse; sometimes with an equable, at other times with a jerking motion, or one will move whilst the other is quiescent: this motion does not take place in the leaves of one branch merely at a time, but is quite devoid of all uniformity or regularity throughout the whole plant, and it seems quite independent of external stimulus, except requiring a warm, close, and quiet atmosphere; sometimes a few leaflets only are in motion, whilst at other times nearly the whole plant is in agitation. This sensitive property, without contact with some extraneous body, is without parallel in the vegetable world, and its causes are quite inexplicable.

XXII. CORONIL'LA, a little crown; the flowers crowning the branches in a corymb. Nat. ord. *Linn.* Papilionaceæ. *Juss.* Leguminosæ. 25 Species.

1. C. E'merus. *Scorpion Senna.* "Shrubby; peduncles about three flowered; claws of the petals three times longer than the calyx; stem angular;" a bushy shrub; leaves alternate; leaflets seven or nine, inversely heart-shaped; flowers yellow or orange; legume slender. April to June. France. 1596. S.

2. C. Valenti'na. *Small shrubby Coronilla.* "Shrubby; leaflets nine to eleven, glaucous, smooth; stipules roundish;" stem a foot and a half high; branches alternate, glaucous, zigzag; leaves alternate; leaflets somewhat wedge-shaped; flowers deep yellow, of a powerful scent; legume long, joints from three to seven. November to March. Spain. 1596. S. Gr. Ho.

3. C. *Glau'ca*. *Great shrubby Coronilla*. "Shrubby; leaflets seven, very obtuse; stipules lanceolate;" stem about three feet high; branches numerous, green or reddish, bent at each joint; leaflets wedge-form, with a small point; flowers yellow, ten or twelve in an umbel, fragrant in the day time, scentless at night. September to May. South of France. 1722. Gr. Ho. S.

4. C. *Corona'ta*. *Large headed Coronilla*. "Somewhat shrubby; leaflets nine, elliptic, lower ones almost close to the stem; stipule opposite the leaf, two parted; legumes pendulous;" stems erect, smooth, shrubby, but dying down to the ground every year; flowers yellow, with a greenish tint at the end of the petals, about twenty. June, July. South of Europe. 1776. P.

5. C. *Mi'nima*. *Least Coronilla*. "Somewhat shrubby, procumbent; leaflets nine, egg-shaped; stipule oposite the leaf, notched; legumes angular, knotty;" stems several, woody, prostrate; branches herbaceous, pale green; leaflets very small; stipules small, open, deciduous; flowers yellow, with a greenish tint at the end, eight or ten on a stalk, longer than the leaves. July. South of Europe. 1658. P.

6. C. *Securida'ca*. *Hatchet Vetch*. "Herbaceous; leaflets numerous, oblong, wedge-shaped; legumes compressed, sword-shaped;" stems about a foot long, procumbent, scored, hollow; flowers yellow, from eight to twelve; flower-stalk axillary,

scored, hairy towards the bottom ; at night the leaflets converge and bend towards the base of the foot-stalk. July, August. Spain. 1562. A.

7. C. Va'ria. *Purple Coronilla*. "Herbaceous ; leaflets numerous, lanceolate, smooth ; legumes cylindrical, erect ;" stems trailing, but climbing if supported ; stipules small, spreading ; flowers about twelve, purple or white ; sometimes the standard is purple, and the wings white. June to November. France. 1597. P.

8. C. Cre'tica. *Cretan Coronilla*. "Herbaceous ; leaflets fifteen, wedge-shaped, blunt ; legumes about five together, cylindrical, erect ;" stems angular, about a foot long ; leaflets smooth ; stipules small ; flowers small, purple ; legume slender, slightly jointed, a little curved. June, July. Candia. 1731. A.

Many of the species of *Coronilla* have been long cultivated as delicate ornamental plants ; it is said that the leaves of most of them, fermented in a vat, would afford a dye very similar to indigo. *C. Varia* is very grateful to cows.

XXIII. ORNITHOPUS, from ὄρνις ὄρνιθος, a bird, and πόδης, a foot ; its curved legume resembling a bird's foot. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 5 Species.

1. O. Perpusil'lus. *Common Bird's Foot*. "Leaves pinnate ; flowers in heads, accompanied by a leaf ; legumes incurved, headed ;" stems prostrate, furrowed, downy ; leaves pinnate ; leaflets numerous,

elliptic, hairy, rather fleshy; flowers red and white, streaked; legume downy, containing one seed in each of the numerous joints. May to August. Britain. A.

2. O. Compres'sus. *Hairy yellow Bird's Foot.*
"Leaves pinnate; flowers in heads, accompanied by a leaf; legumes compressed, even, jointed, rugged, recurved;" larger than the former; flowers yellow; legumes of square closely united joints. June, July. South of Europe. 1720. A.

3. O. Scorpio'ides. *Purslane-leaved Bird's Foot.*
"Leaves ternate, nearly sessile; the terminal leaflet very large," oval; the two lateral leaflets kidney-shaped; stems many, branching two feet high; flowers on slender foot-stalks, yellow; legumes taper, slender. June, July. South of Europe. 1596. A.

XXIV. SCORPIU'RUS, from *σκορπιός*, a scorpion, and *εύρα*, a tail; alluding to the twisted shape of the legume. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 5 Species.

1. S. Vermicula'ta. *Common Caterpillar.* "Stalks single flowered; legumes covered with obtuse scales;" stem from six to twelve inches high, trailing, jointed; leaves alternate, stalked, lanceolate, hairy, pointed, entire; peduncles axillary, bearing a single yellow flower; legume the size and appearance of a large green caterpillar. June, July. South of Europe. 1621. A.

2. S. Murica'ta. *Two flowered Caterpillar.* "Stalks

two flowered; legumes prickly on the outside;" stems nearly similar to the last, but stronger; leaves broader; flowers somewhat smaller, yellow, two on a stalk; legumes longer, more twisted, spiny. June, July. South of Europe. 1640. A.

3. S. Sulca'ta. *Three flowered Caterpillar.* "Stalks mostly three flowered; legumes with distinct acute spines on the outside;" stems rather prostrate, small, smooth; leaves on short stalks, decurrent, lanceolate, fringed; peduncles long, slender; flowers yellow; legumes scarcely so much twisted as the last. June, July. South of Europe. 1596. A.

4. S. Subvillo'sa. *Four flowered Caterpillar.* "Stalks mostly four flowered; legumes with numerous acute spines on the outside;" stems scored, woolly, procumbent; leaves stalked, broadly lanceolate, entire; stipules narrow; flower-stalks long, scored, axillary; flowers yellow; legumes very much twisted. June, July. South of Europe. 1731. A.

These plants are preserved in curious gardens, on account of their singularity; the first species is the best worth cultivating, as the legumes are larger, and more in form of a caterpillar.

XXV. HIPPOCRE'PIS, from ἵππος, a horse, and κρέπις, a shoe; on account of the shape of the legume. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ.
4 Species.

1. H. Unisiliquo'sa. *Single podded Horse-shoe*

Vetch. "Legumes sessile, solitary, erect;" stems several, simple; the long seed-leaves or cotyledons often remaining at their base; leaves pinnate; leaflets five pair and an odd one, smooth; flowers axillary, solitary, nearly sessile, small, pale yellow; legumes with bristly tufts at the back. June, July. Italy. 1570. A.

2. H. *Multisiliquo'sa*. *Many podded Horse-shoe Vetch.* "Legumes stalked, crowded, circular;" stem simple, furrowed; leaves pinnate, alternate; flowers axillary, yellow, many clustered, on long stalks; legumes much curved, often forming a circle. July, August. South of Europe. 1683. A.

3. H. *Como'sa*. *Tufted Horse-shoe Vetch.* "Legumes stalked, clustered, curved, waved on both margins;" stems prostrate, furrowed; leaves pinnate; leaflets numerous, obovate; peduncles very long; partial flower-stalks short, hairy: flowers yellow; legumes recurved, rough, with little glands. April to August. England. P.

Few genera possess so decided a character as this; the horse-shoe appearance of the legume being so striking, that no doubt can exist respecting any of the plants which constitute the genus *Hippocrepis*.

XXVI. TRIGONEL'LA, diminutive of *trigona*, three-sided; alluding to the triangular flowers. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 17 Species.

1. T. Ruthe'nia. *Small or Russian Fenugreek.*
"Legumes stalked, crowded, drooping, linear, lanceolate, straight; leaflets lanceolate, abrupt, with three terminal teeth;" stems numerous, spreading, leafy; leaves of three delicate leaflets; flowers yellow within, purplish without, on short axillary heads. June, July. Siberia. 1741. P.

2. T. Platycar'pos. *Round-leaved Fenugreek.*
"Legumes stalked, crowded, pendulous, half-oval, compressed; stem diffuse; leaflets roundish, sharply serrate;" stem angular; flowers yellowish, streaked with brown, sweet-scented. June to September. Siberia. 1741. B.

3. T. Polycera'ta. *Many horned Fenugreek.*
"Legumes nearly sessile, crowded, erect, nearly straight, long, linear; flower-stalk without awns;" stem diffuse, branched; leaflets obovate, toothed; flowers yellow, three or four together in small heads; legumes hairy, and beautifully veined. July, September. South of Europe. 1640. A.

4. T. Hamo'sa. *Hooked Egyptian Fenugreek.*
"Legumes in clusters, stalked, declining, recurved, nearly cylindrical, even, hairy; their common stalk spinous, longer than the leaf;" stems diffuse; leaflets wedge-shaped; flowers deep yellow, fragrant, in clusters. July, August. Egypt. 1640. A.

5. T. Spino'sa. *Thorny stalked Fenugreek.* "Legumes linear, declining, compressed, sickle-shaped, veiny across, two or three, on a very short axillary,

spinous tipped peduncle;" stem many branched at the base; leaflets ovate, toothed; flowers small, pale yellow. July, August. Candia. 1710. A.

6. T. *Cornicula'ta*. *Horse-shoe Fenugreek*. "Legumes numerous, crowded, declining, compressed, sickle-shaped, veined across; on a long spinous tipped peduncle;" stems numerous, zigzag, leafy; leaflets obovate, toothed; flower-stalks spreading, stout, each bearing a dense umbel of about ten yellow fragrant flowers. June, July. South of Europe. 1597. A.

7. T. *Monspelia'ca*. *Trailing Fenugreek*. "Legumes spreading, curved, compressed, hairy, obliquely veined, shorter than the leaves, on a very long pointed stalk;" stems prostrate, a little hairy; leaflets sharply toothed; flowers deep yellow. June, July. Montpelier. 1710. A.

8. T. *Fæ'num Græ'cum*. *Common Fenugreek*. "Legumes axillary, sessile, oblong, compressed, hairy, with an oblique beak; stems spreading; stipules ovate, entire;" stems stout, reddish, leafy, and hairy; leaflets inversely heart-shaped; flowers two or three, axillary, sessile, yellow, white, or pale blue; wings and keel shorter than the standard; legumes filled with squarish yellow seeds; whole plant with a strong odour. June to August. Montpelier. 1597. A.

The species of this genus have somewhat the general habit of *Trifolium*, the leaves in all being ternate. The last species does not very well answer to its generic characters: its seeds were formerly used in cataplasms; they

are esteemed cooling and detergent, but their powerful scent has caused them to be now nearly exploded; they are still in request with farriers, and are found to be an ingredient in the receipts for curry powder, communicated from India: the herbage is used as fodder in some European countries.

XXVII. GLYCINE, from γλυκύς, sweet; the leaves and roots of one principal species being of that flavour. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 44 Species.

1. G. A'pios. *Tuberous rooted Glycine.* "Leaves unequally pinnate; leaflets seven, ovate, lanceolate; clusters shorter than the leaf; stem herbaceous; twining," eight or ten feet high; flowers in short spikes, dull purple or flesh colour. August, September. Virginia. 1640. P.

2. G. Frutes'cens. *Shrubby Glycine, Caroline Kidney Bean Tree.* "Leaves unequally pinnate; leaflets nine, ovate; clusters with floral leaves; stem shrubby, twining," about fifteen feet high; flowers axillary, in clusters, purple; legumes long, cylindrical. June to September. Carolina. 1724. S.

3. G. Monoi'ca. *Pale flowered Glycine.* "Leaves ternate, ovate, smooth; stem hairy; clusters of flowers pendulous," those proceeding from the stem barren, those from the root fertile, but without petals; stem grey; flowers with a pale violet standard; wings and keel white. This plant is remarkable in this.

class, for the separation of sexes; the laws of fructification seem to be the same as in *Viola Mirabilis*; it also perfects the fruit under ground. September. North America. 1781. P.

4. G. Tomento'sa. *Downy Glycine, Virginian Mountain Pea.* "Leaves ternate, woolly; clusters axillary, very short; legumes two seeded;" stems twining, three cornered, hairy; at each joint a single leaf; leaflets roundish, wrinkled; flowers three or four, pale yellow. June to September. North America. 1732. P.

XXVIII. CLITO'RIA, from κλιτος, to inclose. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 6 Species.

1. C. Maria'na. *Maryland Clitoria.* "Leaves ternate; calyx cylindrical;" stem about five feet high, twining, weak; flowers axillary, pale blue within, whitish without; standard large; legumes long, pointed, a little inflated; seeds roundish. August. North America. 1759. P.

XXIX. ROBI'NIA, from Jean Robin, gardener to Henry IV. of France, who introduced the first species into that kingdom. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 20 Species.

1. R. Pseu'do Aca'cia. *Common Acacia.* "Partial stalks, single flowered; leaves pinnate, with an odd leaflet; stipules spinous; legumes smooth, compressed;" leaflets many, of a pleasant light green,

elliptic; flowers in bunches, white, sweet scented: a large and handsome tree. May, June. North America. 1640. T.

2. R. Visco'sa. *Clammy Robinia*. "Partial stalks, single flowered; leaves pinnate, with an odd leaflet; branches and legumes clothed with viscid glands;" a smaller tree than the former; branches dark red; flowers variegated, pink and white. June to August. North America. 1797. T.

3. R. His'pida. *Rose Acacia, or Hairy Robinia*. "Branches calyx and flower-stalks hispid; thorns none; leaves pinnate, with an odd leaflet; partial stalks single flowered;" a shrub, about six feet high; flowers numerous, pink, large; leaflets larger and rounder than in the first species. May to September. Carolina. 1743. S.

4. R. Caraga'na. *Caragana, or Siberian Pea Tree*. "Stalks single flowered, many together; leaves abruptly pinnate; leaflets elliptic, about four pair; leaf-stalks unarmed; legumes cylindric;" a bushy shrub, producing from each bud numerous large yellow flowers; the stipules change into awl-shaped thorns. R. Altagona, a smaller shrub, leaflets more numerous, is by Dr. Pallas esteemed only a variety of this. April, May. Siberia. 1752. S.

5. R. Spino'sa. *Thorny Robinia*. "Stalks single flowered, very short; leaves abruptly pinnate; leaflets three pair, wedge-shaped, smooth; stipules and

leaf-stalks spiny;" legume cylindrical; stems about six feet high, much branched; branches long, twisted; thorns very strong; flowers yellow, axillary. April, May. Siberia. 1775. S.

6. R. Juba'ta. *Bearded Robinia*. "Stalks simple, single flowered; leaves abruptly pinnate; leaflets in numerous pairs, downy, lanceolate; leaf-stalks thread-form, thorny, permanent, reflexed;" a small shrub, two feet high; branches woolly; flowers purple; legumes cylindric. June. Siberia. 1796. S.

7. R. Haloden'dron. *Salt Tree Robinia*. "Stalks three flowered; leaves abruptly pinnate; leaflets two pair, silky; leaf-stalks spinous and permanent; legumes inflated;" corolla of a delicate rose colour, but seldom flowering here; a hardy shrub, about six feet high. May, June. Siberia. 1779. S.

8. R. Cham'lagu. *Shining Robinia*. "Stalks single flowered; leaves abruptly pinnate; leaflets two pair, obovate; leaf-stalks spinous; stipules awl-shaped, spinous, permanent; branches decumbent;" leaves shining, tipped with a bristly point; flowers large, yellow, pendulous; centre of the standard at first green, then red; a shrub about four feet high. May, June. China. 1775. S.

9. R. Frutes'cens. *Shrubby Robinia*. "Stalks single flowered; leaves of four, obovate, smooth, bristle-pointed, equal, stalked leaflets: branches ascending;" stem bushy; from three to eight feet high;

stipules lanceolate, at length combining with the leaf-stalk into a three branched spine; flowers yellow. April, May. Siberia. 1752. S.

10. R. Pygmæ'a. *Dwarf Robinia*. "Stalks single flowered; leaves pinnate; leaflets four, linear, lanceolate, spinous, pointed, nearly sessile," more or less silky and hairy; flower-stalks axillary; flowers yellow: a shrub about three feet high. April, May. Siberia. 1751. S.

Several of the species of this handsome genus are the frequent ornament of most shrubberies. R. Pseudo Acacia grows in America, where it is called Locust Tree, to a great height, and its wood is much valued for its durability; it is very apt here, however, to have its branches broken by strong winds, by which it is rendered rather unsightly.

XXX. INDIGO'FERA, from its yielding the blue dye called Indigo, and that from its native country India. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 51 Species.

1. I. Tinctoria. *Dyer's or East Indian Indigo*. "Leaves pinnate; leaflets oblong, smooth on both sides, in four pairs, conjugate; clusters shorter than the leaf; legumes round, curved; stem shrubby;" standard of the corolla yellow; wings and keel red. July, August. East Indies. 1731. S. Hot Ho.

2. I. Anil. *West Indian Indigo*. "Leaves pinnate; leaflets oblong, in three pairs, conjugate; clusters shorter than the leaf; legumes sickle-shaped;

stem shrubby ;" leaflets smooth above, hoary underneath ; corolla as in the last. July, August. West Indies. 1731. B. Hot Ho.

Most of the species of *Indigofera* produce the blue dye so well known in commerce, but the two just described are supposed to be those most used in their respective countries of growth. The dye is obtained from the plants undergoing a fermentation with water, in large vats; a mucilaginous substance is thus obtained, the precipitation of which becomes indigo : this is carefully dried in shallow boxes, exposed to the sun, and carefully packed for exportation.

XXXI. CICER, of uncertain derivation ; perhaps from κινεῖ, strength. Nat. ord. *Linn.* Papilionaceæ. Juss. Leguminosæ. 2 Species.

1. C. Arietinum. *Chick Pea.* "Leaves unequally pinnate ; leaflets serrate ; legume two seeded ;" stem a foot and a half high, erect, leafy, spreading, angular ; leaflets about eight pairs, egg-shaped, hairy ; flowers small, purple, or white ; flower-stalks solitary, axillary, one flowered, bent ; seeds one or two, nearly globular, sometimes angular, with a fancied resemblance to a ram's head, whence its specific name. July, August. South of Europe. 1548. A.

This plant is cultivated in the South of Europe, like other pulse, for agricultural purposes ; it is given green to sheep and cows : its seeds are eaten either raw or boiled, but do not agree with delicate stomachs. In England it is but little known, as its seeds will not ripen unless in

very warm summers. It seems to have been in much use with the lower class of the Romans: and from its successful cultivation the ancestors of the great orator derived their family name of Cicero.

XXXII. ER'VUM, an ancient name of unknown derivation. Nat. ord. *Linn.* Papilionaceæ. *Juss.* Leguminosæ. 7 Species.

1. E. Lens. *Common Lentil.* " Peduncles two flowered; seeds compressed, convex;" stems weak, a foot and a half high, with pinnate leaves at each joint, ending in a tendril; leaflets many; flowers on short stalks, from the sides of the branches, three or four together, pale purple; legumes short and flat; seeds two or three. May. France. 1548. A.

The seed of this pulse is flat, with a little convexity on one side; and has given its name to glasses ground into some such form for optical purposes; it stands in much the same degree of estimation as *Cicer Arietinum*, for agricultural use and for food; being much eaten in soups by the poorer sort of people in the Levant: it has been cultivated in England, but with small success. Two species of this genus are most troublesome weeds in corn-fields, throughout Europe, known as Common Tares; they are too minute to be eradicated when young, and when they have fixed their tendrils upon the crop, they cannot be separated without rooting up, in the language of Scripture, "the wheat with them." In wet seasons, in England, whole fields of corn are overpowered and destroyed by these intruders.

XXXIII. CYTISUS, from the Isle of Cythnus, one of the Cyclades, where it was first noticed. Nat. ord. *Linn.* Papilionaceæ. *Juss.* Leguminosæ. 24 Species.

1. *C. Labur'num*. *Common Laburnum*. "Clusters simple, pendulous; leaves ternate; leaflets ovate, oblong;" a small tree about twenty feet high; leaves on long stalks, commonly three together, from one point; calyx yellowish; corolla pale yellow; leaves and legumes smooth; there is a less common variety, a larger tree, with broader leaves, silky beneath; legumes hoary. May, June. Switzerland. 1596. T.

2. *C. Ni'gricans*. *Black Cytisus*. "Clusters terminal, erect; calyx hairy, with minute teeth; leaflets elliptic, hairy beneath;" a shrub about a yard high, putting out many lateral spreading branches near the ground; leaves ternate, dark green; clusters terminal, four or five inches long; flowers handsome, yellow. June, July. Austria. 1730. S.

3. *C. Divarica'tus*. *Clammy Cytisus*. "Clusters terminal, erect; calyx and legume clammy, with small loose scales; leaflets oblong;" leaves ternate; corolla before opening tawny, but when open the upper part of the standard only of that colour, the rest yellow; calyx tawny. July, August. Spain. 1656. S.

4. *C. Sessiliſo'lius*. *Common Cytisus*. "Clusters erect; calyx with a triple floral leaf; leaves immediately approaching the flower sessile;" leaflets ternate, obovate, on very short foot-stalks; flowers close,

short, terminating ; clusters bright yellow ; legumes short, broad ; a bushy shrub, rising seven feet. May, June. Italy. 1620. S.

5. C. Welga'ricus. *Wing-leaved Cytisus.* " Clusters terminal, leaning one way ; leaves pinnate, hoary ; leaflets roundish ; stipules awl-shaped ;" a shrub about two feet high ; leaflets commonly seven pair, with an odd one ; flowers large, deep yellow, in axillary and terminating clusters ; calyx woolly ; legumes with glandular hairs. May, June. Siberia. 1786. S.

6. C. Hirsutus. *Hairy or Evergreen Cytisus.* " Flower-stalks aggregate, mostly terminal ; calyx hairy, three cleft ; leaflets obovate, dagger-pointed, hairy beneath ;" stem soft, shrubby, branched, eight or ten feet high ; whole plant hairy ; leaves ternate, placed closely on the branches ; flowers in short clusters, pale yellow ; legumes long, narrow, hairy. June to August. Siberia. 1739. E. S.

7. C. Capitatus. *Cluster flowered Cytisus.* " Flowers in heads ; branches erect, round, stiff, woolly ; leaflets ovate, woolly ; floral leaf linear, close to the calyx ;" stems a foot and a half high, hairy ; flowers in genuine heads, yellow, mostly terminating. June, July. Austria. 1774. S.

8. C. Austriacus. *Austrian Cytisus.* " Flowers in terminating umbels ; stems erect ; leaves ternate ; leaflets lanceolate, downy, ending in a tooth ;" stem

shubby, four feet high, branched; branches when young covered with a green bark; flowers bright yellow, with a cluster of leaves under them; legumes short, woolly. June to September. Austria, Siberia. 1741. S.

9. C. Purpu'reus. *Purple flowered Cytisus.* "Flowers axillary, solitary, stalked; stems procumbent; leaves ternate; leaflets obovate; legumes linear, waved;" stems somewhat shrubby; twigs slender, soft, ascending; leaves scattered, dark green; calyx tinged with purple; corolla large, bright red. May to August. Austria. 1792. S.

10. C. Supi'nus. *Trailing Cytisus.* "Flowers stalked, about two together; leaves ternate; leaflets woolly, obovate, obtuse; stems decumbent, becoming shrubby," the ends closely beset with leaves and flowers; flowers erect, deep yellow, becoming reddish. May to August. South of Europe. 1755. S.

11. C. Argen'teus. *Silver-leaved Cytisus.* "Penduncles commonly three together, terminal; leaves ternate; leaflets oblong, lanceolate, silky; legumes linear, silky; stems decumbent;" upper branches herbaceous; a plant hoary, shining; floral leaves two or three, growing at the base of the calyx; flowers yellow; standard woolly; wings smooth. August. South of France. 1739. S.

All these plants afford much ornament in clumps and borders, by their beautiful and numerous clusters of

Flowers. C. Laburnum is cultivated even in the middle of towns; its wood is hard and valuable, admitting a fine polish; the seeds are bitter and poisonous: hares and rabbits are particularly fond of the leaves and bark.

XXXIV. GALE'GA, supposed to be a corruption of *herba Gallica*. Nat. ord. Linn. Papilionaceæ. Juss. Lomentaceæ. 37 Species.

1. *G. Officinalis*. *Officinal Galega, or Goat's Rue.* "Leaves pinnate; leaflets lanceolate, dagger-pointed, smooth; stipules arrow-shaped; legumes stiff, upright;" stems channelled, hollow, from two to five feet high; leaflets about seven pair; flowers in loose spikes, pale blue, white, or variegated. This plant is celebrated by Mr. Boyle, for its virtues in pestilential diseases. June to September. South of Europe.

1568. P.

2. *G. Virginiana*. *Virginian Galega.* "Legumes inversely sickle-shaped, compressed, downy, spiked; calyx woolly; leaflets oval, acuminate;" stem three feet high; leaflets seven or nine; whole plant covered with a silvery down; flowers three or four, red. June to August. North America. 1765. P.

3. *G. Toxicaria*. *Surinam Fish Poison.* "Leaves pinnate; leaflets oblong, woolly beneath; clusters elongated, terminal; legumes cylindric, spreading;" stems six feet high, branched, spreading. The leaves and branches of this plant, well pounded, and thrown into a river, have the singular property of intoxicating

fish: the larger fish recover, but it is fatal to the young fry. It has not flowered in England. South America. 1791. S. Hot Ho.

XXXV. *Lo'tus*, from λω, to desire; cattle being fond of it. Nat. ord. *Linn.* *Papilionaceæ*. Juss. *Leguminosæ*. 30 Species.

* *Flowers one or two on a stalk; rarely three.*

1. *L. Mari'timus*. *Sea Bird's Foot Trefoil*. "Legumes solitary, with four membranous wings; leaves smooth; floral leaves lanceolate;" stems several, decumbent; leaves ternate; leaflets obovate, fleshy, sessile; stipules ovate, longer than the leaf-stalks, which are axillary, solitary, commonly one flowered; corolla large, yellow, with flesh-coloured veins on the standard. May to October. Europe. 1683. P.

2. *L. Siliquo'sus*. *Square podded Bird's Foot Trefoil*. "Legumes solitary, with four membranous wings; stems trailing; leaves downy beneath;" nearly allied to the last; stems procumbent; leaves and calyxes hairy; leaves alternate; leaflets nearly sessile, heart egg-shaped, with a point; stipules large, heart-shaped; flower solitary, terminating; large, pale yellow, nearly sessile. July, August. South of Europe. 1683. P.

3. *L. Tetragonolo'bus*. *Winged Pea, or Bird's Foot Trefoil*. "Legumes solitary, with four membranous wings; floral leaves ovate, ternate; stems

procumbent; stipules ovate; flower-stalks axillary, alternate, sustaining one or two large red velvety flowers; wings purple; legume thick. July, August. Sicily. 1596. A.

4. L. *Conjugatus*. *Twin podded Bird's Foot Trefoil.* "Legumes conjoined in twos, each with four membranous wings; floral leaves ovate, oblong;" differs from the last in the flowers being only half the size, and yellow. July, August. Montpelier. 1754. A.

5. L. *E'dulis*. *Esculent Bird's Foot Trefoil.* "Legumes mostly solitary, gibbous, curved;" stems several, trailing; at each joint is a ternate leaf; leaflets roundish; flowers small, yellow, on long stalks; legumes thick. July, August. Candia. 1710. A.

6. L. *Peregrinus*. *Flat podded Bird's Foot Trefoil.* "Legumes mostly two together, linear, compressed, nodding;" flower-stalks short; flowers yellow; stems not much branching; legumes very narrow. July. South of Europe. 1713. A.

7. L. *Angustissimus*. *Narrow-podded Bird's-foot Trefoil.* "Legumes mostly two together, straight, erect;" stem erect; flower-stalks alternate; stems straight, numerous, branched, reddish; flower-stalks axillary, solitary; calyx hairy; flowers yellow; legumes more commonly one than two, slender. July, August. South of France. 1683. B.

8. L. *Ara'bicus*. *Red-flowered Bird's-foot Trefoil.* "Legumes cylindrical, awned; stems prostrate; pe-

duncles three-flowered; floral leaves simple, not ternate;" stems several, slightly downy; leaflets ovate, blunish, somewhat hoary; leaf-stalks short; peduncles erect; flowers nodding, pale red, with darker veins. July to November. Arabia. 1773. A.

9. L. *Oreithopodioides*. *Claw-podded Bird's Foot Trefoil*. "Legumes united in threes, curved, compressed; stems diffuse," branched; leaves ternate, with two appendages or stipules; flower-stalks axillary; flowers yellow. June to August. Sicily. 1683. A.

10. L. *Jacobaeus*. *Dark-flowered Bird's Foot Trefoil*. "Legumes mostly conjoined in threes; stem erect, woody; branches herbaceous; leaflets linear;" stem slender; branches many, slender; leaves sessile, hoary; leaflets narrow, white; flowers axillary from the upper part of the stem, on slender stalks of a rich brown purple colour. January to December. Cape Verd Islands. 1714. S. Gr. Hu.

** *Peduncles many flowered; flowers forming a head*.

11. L. *Hirsutus*. *Hairy Bird's Foot Trefoil*. "Heads of flowers roundish; stem erect, rough haired; legumes egg-shaped;" stem three feet high, shrubby, branchy; leaves ternate, hoary, with two stipules; calyx hairy, reddish; flowers dirty white, with a few pale red marks. January to August. South of Europe. 1683. S. Gr. He.

12. L. *Rectus*. *Upright Bird's Foot Trefoil*.

" Heads of flowers somewhat globular; stem erect, even; legumes straight, smooth;" stems several, upright, strong, at each joint a ternate leaf, with wedge-shaped leaflets, hairy beneath; at the base of the peduncle two heart-shaped stipules; flowers pale flesh-colour, more than twenty; in the last species they are fewer than ten. June to August. South of Europe. 1640. P.

13. L. Odora'tus. *Sweet-scented Bird's Foot Trefoil.* " Hairy; heads of flowers hemispherical; floral leaves simple; stipules ovate, leaf-like; legumes straight, a little swelling out, dagger pointed;" stem, leaves, and calyx hairy; flowers yellow, sometimes streaked with red, sweet scented like violets or orris-root. June to August. Barbary. 1804. P. Gr. Ho.

14. L. Cornicula'tus. *Common Bird's Foot Trefoil.* " Heads depressed; of few flowers; stems decumbent, solid; legumes spreading, nearly cylindrical;" stems spreading in every direction, angular, leafy, with close pressed hairs; flowers on a long stalk, golden yellow, more or less stained with dark red; legumes brownish or copper-colour: a plant much varying; stems taller or shorter, sometimes a little shrubby; leaves narrower, more or less hoary; heads of flowers sometimes very woolly. June to August. Britain. P.

15. L. Cytisoïdes. *Downy Bird's Foot Trefoil.* " Heads of flowers hemispherical; stem diffused, very

much branched; leaves woolly," ternate, with two stipules; flowers on short peduncles, four or six in a head, yellow; legumes taper. July, August. South of Europe. 1752. P.

16. L. *Doryc'num*. *Shrubby Bird's Foot Trefoil*. "Heads of flowers leafless; leaves sessile, quinate or in fives;" stems shrubby, weak, three or four feet high; branches thinly set with small hoary leaves; flowers small, white, terminal, in small heads; legumes short. This species is now arranged under a new genus, with the name of *Dorycnium Monspeliense*. July to September. South of Europe. 1640. S. Gr. Ho.

Much dispute has arisen on the etymology of the word *Lotus*, some supposing it to be of Egyptian origin, and consequently now inscrutable to us; its application to various plants, see *Zizyphus*, vol. i. p. 185, and *Nymphaea*, vol. ii. p. 26, have been explained as these occurred; as a generic appellation it is now confined to the present family of herbaceous plants, which, in countries sparingly furnished with grass, are cultivated for the uses of cattle; thus far agreeing with its Greek derivation. The flowers of *L. Corniculatus* become greenish when dried like those of the genus *Indigofera*. The plant is extremely common throughout Europe in meadows and pastures; it has been cultivated in Hertfordshire on dry and chalky soils it is said with much success. The green pods or legumes of *L. Edulis* and *L. Tetragonolobus* are eatable, though a rather coarse food. The latter plant is often seen in gardens, and is celebrated in botanic history as having first called

the attention of Linnaeus to the sleep of plants, he having observed that the corollas became invisible in the evening, enfolding themselves in their floral leaves.

XXXVI. MEDICA'GO, from *Media*, a plant called Medica, being introduced from that country into Greece during the Persian war with Darius Hystaspes. Nat. ord. Linn. Papilionaceæ. Juss. Leguminosæ. 37 Species.

1. *M. Arbo'rea*. *Tree Medick, or Moon Trefoil.* "Legumes crescent-shaped, entire at the margin; stem arborescent," from five to ten feet high, bushy; leaves ternate, on long stalks; leaflets inversely heart-shaped, hoary beneath, as are also the stalks; flowers in axillary stalked heads, or short clusters of a full yellow; legume veined. May to November. Italy. 1596. S. Gr. Ho.

2. *M. Radia'ta*. *Ray-podded Medick.* "Legume kidney-shaped, toothed at the edge; leaves ternate;" stem erect, a span high, a little branched; leaves stalked; leaflets obovate, toothed, hairy; flowers small, yellow, two or three on each axillary stalk; calyx hairy. June, July. Italy. 1629. A.

3. *M. Circinna'ta*. *Pinnate Kidney Medick.* "Legume kidney-shaped, toothed at the edge; leaves pinnate, lyrate, entire;" leaflets obovate, entire, thick, hairy, odd one very large; flowers yellow, two or three on a long stalk. July, August. Spain. 1640. A.

4. *M. Sativa*. *Purple Medick, Lucerne.* "Flower-

stalks in clusters; legumes smooth, twisted; stem erect, smooth," scored, from one to two feet high, alternately branched; stipules lanceolate, awned; leaves ternate; leaflets elliptic, entire at the base, serrate towards the end, mid-rib lengthened to a point; flowers in thick spikes; corolla blue purple. June, July. England. P.

5. *M. Falca'ta*. *Yellow Medick*. "Flower-stalks clustered; legumes crescent-shaped; stem procumbent;" leaflets oblong, toothed at the apex; legume sickle-shaped, not twisted; flowers varying from yellow to purple, often greenish: a plant much resembling the last species. July. England. P.

6. *M. Lupuli'na*. *Black or Hop Medick, or None-such*. "Spikes ovate; legumes kidney-shaped, rugged and veiny, single seeded; stem procumbent," widely spreading; leaflets broad, roundish, ovate, finely toothed; flowers yellow, small, in dense stalked spikes. May to August. Britain. A.

7. *M. Mari'na*. *Downy Sea Medick*. "Stalks many flowered; herb procumbent, very downy; leaflets obovate, crenate or entire; stipules undivided; legumes hairy, with strong radiating teeth;" stems prostrate, much branched; leaflets wedge-shaped; flowers numerous, of a full yellow, in dense round heads; legume cylindric, spiral, three or four times twisted. June, July. South of Europe. 1596. P.

8. *M. Polymorpha*. *Variable or Many-form Medick*. "Legume spiral; stipules toothed; stems

diffused," somewhat angular, hoary, from a hand to a foot in length; leaves ternate; leaflets roundish, somewhat serrate; peduncles axillary, longer than the leaves, round, downy, forming a spike; flowers small, commonly yellow; calyx smaller than the corolla, hairy; legume various. Linnaeus remarks, that like the dog among animals, this plant produces its numerous varieties in different countries; subsequent botanists have erected the following into distinct species:

1. *Orbicularis. Flat-podded Medick.* Legumes smooth, globular, depressed, marked with elevated radiating veins, the end three or four times twisted. 1683.
2. *Scutellata. Snail Medick.* Legumes globular, spiral, convex beneath, the end six or seven times twisted, wrinkled, without teeth. 1562.
3. *Tornata. Screw-turned Snail Medick.* Legumes cylindric, flat at each end, twisted in numerous turns, without spines, the whole in shape of a wine barrel. 1658.
4. *Turbinata. Close-turned Snail or Turban Medick.* Legumes egg-shaped, convex at each end, thick edged, numerously and closely turned, without spines. 1680.
5. *Tuberculata. Warty Snail Medick.* Legumes nearly cylindric, flattish at both ends, of many horizontal spiral twists, and beset with a double row of wrinkled warts. 1658.

6. *Intertexta.* *Hedge-hog Medick.* Legumes oval, many twisted, beset with two rows of long, awl-shaped, close pressed thorns. 1629.

7. *Maculata.* *Heart Medick, or Clover.* Legumes depressed, twisted, fringed with numerous, long, spreading bristles; leaflets with a black spot in the centre. England.

8. *Coronata.* *Coronet Medick.* Legumes cylindrical, flat at each end, hairy, of about two twists, bordered with an ascending and descending row of close pressed strong spines. 1660.

9. *Muricata.* *Prickly Medick.* Legumes depressed, with about five twists, and short, depressed, radiating teeth. England.

10. *Rigidula.* *Thorny-podded Medick.* Legumes cylindrical, of many turns, with conical, straight, spreading spines. 1730.

11. *Laciniata.* *Jagged-leaved Medick.* Legumes cylindrical, of many turns, with two rows of strong hook-tipped spines; leaflets narrow, jagged. 1683. All these varieties are found in the countries of the South of Europe, and flower from May to July. A.

The first species, Tree Medick, possesses considerable beauty; and is thought to be the *Cytisus* of Virgil, celebrated by him for causing cows to yield abundance of milk, and as being particularly grateful to goats and bees. The fourth species, Lucerne, is strongly recommended for the purpose of feeding cattle, but has not been generally adopted. Yellow and Black None-such Medick have sometimes been cultivated with the same intention. In

Norfolk the latter is sown mixed with Ray Grass. Several of the numerous varieties of *M. Polymorpha* are not uncommon in gardens, under the names of Snails and Hedge-hogs, from the singular form of their seed vessels: they are frequently accompanied by the *Scorpiurus Vermiculata*, the vegetable caterpillar.

CLASS XVIII.

POLYADELPHIA.

Order Decandria.

I. **THEOBROMA.** Calyx five leaved; corolla five petaled, vaulted at the base; nectary pitcher-shaped, with five taper points; filaments five, each bearing two anthers; stigma five cleft; capsule five celled; seeds nestling in pulp.

Order Icosandria.

II. **CITRUS.** Calyx five cleft; petals of the corolla five, oblong; stamens about twenty, united into various parcels; berry nine celled.

Order Polyandria.

III. **HYPERICUM.** Calyx in five deep segments, inferior; petals of the corolla five; filaments numerous, united by the base into three or five cells; capsules many celled; many seeded.

IV. **ASCYRUM.** Calyx four leaved; petals of the corolla four; filaments many, in four divisions; capsules one celled, two or three valved.

CLASS XVIII.

POLYADELPHIA.

Order Decandria.

I. THEOBRO'MA, from θεος, a god, and βρωμα, food; in allusion to its fruit. Nat. ord. Linn. Colum-niferæ. Juss. Malvaceæ. 2 Species.

1. T. Caca'o. *Smooth-leaved Chocolate Nut Tree.* "Leaves entire, smooth on both sides;" a tree about the size of an Apple Tree, but seldom more than six inches in diameter; leaves alternate, stalked, drooping, a foot long, elliptic, pointed, slightly wavy; flowers reddish, small, several together in tufts, stalk-ed; calyx rose-coloured; fruit red or yellow, about three inches in diameter, inclosing many seeds. South America. 1739. T. Hot Ho.

The seeds of this beautiful tree are dried or roasted by a proper apparatus; they are then reduced to a fine powder, which is wrought into a paste with orange-water and some aromatic spices or perfumes; it is then formed into cakes, which are exported, and employed as a favourite article of diet for breakfast, throughout most countries of Europe.

Order Icosandria.

II. CI'TRUS, a word whose derivation is quite un-known. Nat. ord. Linn. Bicornes. Juss. Aurantia. 6 Species.

1. C. Me'dica. *Lemon Tree.* "Leaf-stalks linear; leaves egg-shaped, acuminate;" a small tree, about eight feet high, in its wild state prickly, with long branches; leaves alternate, somewhat serrate, smooth, pale green; flowers white, odoriferous, on many-flowered foot-stalks; fruit a berry, with a nipple-like protuberance at the tip; rind pale yellow, fragrant. Var. 1. C. Limon, *the Lime*, the fruit of which is egg-shaped, without the protuberance, with a very thin rind; not half so large as the Lemon. The Citron seems to be another variety, of an oblong shape, with a very thick rough rind. May to August. Asia. 1648. S. Gr. Ho.

2. C. Auran'tium. *Seville Orange Tree.* "Leaf-stalks winged; leaves acuminate; stem arboreous;" a middle sized tree, with a greenish-brown bark; branches generally spinous; leaves thick, shining, smooth, ovate, lanceolate, sprinkled with small resinous dots; flowers white, highly fragrant, in short terminal clusters; fruit round, yellow, compressed into the form of an oblate spheroid; juice sour, bitter. Var. 1. C. Sinensis, *China Orange*, with a smoother and thinner rind; the juice sweet. May to August. India. 1695. S. Gr. Ho.

3. C. No'bilis. *Mandarin Orange.* "Leaf-stalks somewhat linear; fruit warty, depressed; stem without thorns; branches ascending;" leaves scattered, lanceolate, entire, shining, odorous; flowers white, sweet scented, in terminal clusters; fruit roundish,

red within and without, twice the size of a China orange; rind thick, sweet. June. China. 1805. E. S. Gr. Ho.

4. C. Decuma'na. *Shaddock Tree.* "Leaf stalks winged; leaves obtuse, notched," thick, shining; fruit very large; branches spreading, spinous; wings of the leaf-stalks large, heart-shaped; flowers white, very odorous, in long clusters; fruit yellowish green, smooth, twelve celled or more; the juice in some sweet, in others acid; rind thick, bitter. May to August. India. 1724. E. S. Gr. Ho.

All the species of this delightful genus are natives of the East, but have been long since introduced into the West Indies and the South of Europe, with the greatest success; they are subject to numerous varieties. The Citron is esteemed a variety of the first species, and was originally introduced from Media, whence the specific name *Medica*. It is seldom eaten raw, but preserved as a sweet-meat. From the rind of another variety, first cultivated at Bergamo, in Italy, is obtained the perfume called Bergamot. The virtues of lemon, as an antiscorbutic, and its uses in cookery, to say nothing of the beverage called Punch, are well known. In the West Indies the juice of the Lime is preferred; the lemon not retaining there its acidity. The cultivated varieties of the China Orange are numerous: for its grateful flavour, it is in universal esteem throughout the world. The Seville Orange thrives better with us: it is esteemed for its culinary purposes, and for making wine. The flowers of all the species are used in perfumes and scented waters. The Shaddock

is so called from a captain of that name, who first carried it from the East to the West Indies.

Order Polyandria.

III. HYPERI'CUM, from ὑπερ, above, and εικόνη, an image; it being used to adorn idols. Nat. ord. Lign. Rotaceæ. Juss. Hyperica. 83 Species.

* *With five styles.*

1. H. Caly'cinum. *Large flowered St. John's Wort, or Tutsan.* " Stem somewhat shrubby, branched; flowers solitary, terminal; calyx obovate, very blunt; leaves oblong, two rowed;" flower-stalks slender, declining; leaves smooth; flowers very large, bright yellow; capsules pyramidal; stem tinged with red, square. June to September. Greece. 1676. S.

2. H. A'scyron. *Siberian Tutsan, or St. John's Wort.* " Stem four-cornered, herbaceous, simple; leaves sessile, oblong, acute, smooth," opposite; flowers terminating; calyx green; corolla pale yellow, large; stamens shorter than the pistils; leaflets of the calyx roundish. June to September. Siberia and the Pyrenees. 1774. P.

** *With three styles, calyxes very entire.*

3. H. Androsæ'mum. *Common Tutsan, or Park Leaves.* " Fruit berried; leaves ovate, sessile; stem shrubby, two edged," branched towards the top, smooth, reddish; segments of the calyx unequal, ob-

tuse; flowers terminating, four together, large, yellow; berries black. July to September. Britain. P.

4. H. Olym'picum. *Olympian St. John's Wort.* "Segments of the calyx unequal, acute; stamens shorter than the corolla; stem shrubby;" flowers terminal, three or four together, bright yellow; stems many, upright, rather woody; leaves small, sessile, lanceolate, dotted. July to September. The Levant. 1706. S.

5. H. Ela'tum. *Tall St. John's Wort.* "Calyx lanceolate, ovate, acute; stamens longer than the corolla; leaves ovate, oblong; stem shrubby;" flowers yellow. July, August. North America. 1762. S.

6. H. Hirci'num. *Stinking Shrubby St. John's Wort.* "Stamens longer than the corolla; stem shrubby, two edged; calyx lanceolate, acute; leaves oblong;" stems three feet high; leaves in pairs, sessile, of a strong rank smell; flowers in terminating clusters, yellow. There is a variety of this species, a much smaller plant. July to September. South of Europe. 1640. S.

7. H. Proli'ficum. *Prolific St. John's Wort.* "Flowers corymbose, axillary, and terminal; leaves lanceolate, linear, obtuse; stem shrubby, two edged," straight, purplish; leaves turned back at the edge; panicle of flowers small, forked; petals yellow. June to August. North America. 1758. S.

8. H. Canaden'se. *Canadian St. John's Wort.* "Stem herbaceous, quadrangular, forked at the top;

leaves sessile, linear, narrowed at the base; capsules coloured, twice as long as the calyx;" panicle forked; flowers stalked, small, yellow. July to September. North America. 1770. P.

9. H. Tomento'sum. *Woolly St. John's Wort.*
" Calyxes serrate, glandular; leaves oblong, half stem-clasping, flexuose, downy; stems prostrate;" flowers yellow, in terminating forked clusters; stamens in three sets. July to September. South of Europe. 1648. P.

The first species, with its large handsome flowers, is very common in shrubberies. The leaves of *H. Androsænum* were formerly applied to fresh wounds, and hence the French name *la toute saine*, corrupted by us into Tutsan. We have several native species not destitute of beauty, found in thickets and hedges, but rarely admitted into gardens. Some inconspicuous American species have been introduced, but if they are still remaining, they are only to be seen in the collections of the curious. The medical writers of the middle ages gave the name of *fuga Daemonum* to a very common native species, *H. Perforatum*, from a supposition that it was useful in maniacal disorders, but its meaning was mistaken, and the common people placed it in their windows and on the images of their saints, imagining it to be a charm against tempests and evil spirits.

iv. A'SCYRUM, from α , privative, and $\sigma\chi\nu\rho\varsigma$, rough, it being a soft plant. Nat. ord. Linn. Rotaceæ. Juss. Hypericæ. 4 Species.

1. A. Crux An'dreæ. *Common Ascyrum, or St.*

Andrew's Cross. "Leaves ovate: stem round; panicle forked;" stems about six inches high, slender, forked towards the top; flowers small, yellow, in loose panicles; capsule small. By some writers this plant is made an *Hypericum*. July. North America. 1759. P. Gr. Ho.

2. A. *Hypericoides*. *Hypericum-like Ascyrum*. "Leaves oblong; branches two edged;" an elegant shrub about three feet high, full of leaves and branches, the latter forked; leaves opposite, nearly sessile, finely perforated; flowers terminating, solitary, yellow; two of the calyx leaves four times larger than the others. July to September. North America. 1759. S. Gr. Ho.

CLASS XIX.

SYNGENESIA.

Order Aequalis.

1. Semifloscular. *Florets all ligulate or strap-shaped.*

i. **SCOLYMUS.** Receptacle chaffy; calyx tiled, spinous; seed down scarcely any.

ii. **CICHORIUM.** Receptacle somewhat chaffy; calyx calycled or doubled; seed crowned with a chaff-like border, shorter than itself.

iii. **CATANANCHE.** Receptacle chaffy; calyx tiled, skinny; seed down five leaved, chaffy; chaffs awned.

iv. **SERIOLA.** Receptacle chaffy; calyx simple, many leaved; seed down rather hairy.

v. **HYPOTHÆRIS.** Receptacle chaffy; calyx somewhat tiled; seed down feathery.

vi. **ANDRYALA.** Receptacle woolly; calyx many leaved, equal, rounded; seed down hair-like, simple, sessile.

vii. **GEROPOGON.** Receptacle naked, or with a few bristles; calyx simple, of many leaves; seeds of the interior florets with a feathery down, of the exterior five awned.

viii. **TRAGOPOGON.** Receptacle naked; calyx simple, many leaved; seed down feathery, on a slender stalk.

ix. **ARNOPOGON.** Receptacle naked, calyx of

one leaf, in eight deep segments ; seed down feathery, on an oblique inflated stalk.

X. PICRIS. Receptacle naked ; calyx double ; the inner equal, the outer lax ; seed down feathery ; the seeds furrowed across.

XI. SCORZONERA. Receptacle naked ; calyx tiled ; the scales skinny at their edge ; seed down feathery, with naked points.

XII. CREPIS. Receptacle somewhat hispid, rough ; calyx calycled or double, with deciduous scales ; seed down hair-like, on stalks.

XIII. CHONDRILLA. Receptacle naked ; calyx calycled or double ; florets in many ranks ; seeds prickly ; seed down simple, stalked.

XIV. PRENANTHES. Receptacle naked ; calyx with scales at the base ; florets in a single row, about five ; seed down simple, nearly sessile.

XV. LACTUCA. Receptacle naked ; calyx tiled, cylindrical, with pointed membranous scales ; seeds compressed ; seed down hair-like, stalked.

XVI. SONCHUS. Receptacle naked ; calyx tiled, swelling at the base ; seed down simple, sessile.

XVII. HIERACIUM. Receptacle nearly naked, dotted ; calyx tiled, ovate ; seed down simple, sessile.

XVIII. LAPSANA. Receptacle naked ; calyx with scales at the base ; its inner scales equal, channelled ; seeds without down, contracted at the top.

XIX. HYOSERIS. Receptacle naked ; calyx with scales at the base ; seed down simple, chaffy.

2. Floscular. Capitate. Florets all tubular, and in globular heads.

xx. ATRACTYLIS. Receptacle chaffy; seed down feathery; calyx imbricated, with scales at the base; corollas radiated, those of the ray five toothed.

xxi. SERRATULA. Receptacle chaffy or hairy; calyx tiled, cylindrical, with scales, unarmed; seed down feathered, permanent, sessile.

xxii. CARTHAMUS. Receptacle chaffy, bristly; calyx tiled with spiny-toothed leafy scales; seed down chaffy, hairy or none.

xxiii. CARLINA. Receptacle chaffy, bristly; calyx radiated with long, coloured, marginal scales; seed down feathery, chaffy.

xxiv. CYNARA. Receptacle bristly, thickish, fleshy; calyx dilated at the base, tiled with somewhat fleshy scales; seed down feathered, sessile.

xxv. CNICUS. Receptacle woolly; calyx tiled, bellying, with thorny scales; seed down feathered.

xxvi. CARDUUS. Receptacle woolly; calyx tiled, bellying, with thoruy scales; seed down hair-like, roughish, often deciduous.

xxvii. ONOPORDUM. Receptacle honey-combed, somewhat chaffy; calyx bellying, with spreading spinous scales; seed down hair-like.

xxviii. LIATRIS. Receptacle naked; calyx oblong, tiled, unarmed, coloured; seed down feathery, sessile, sometimes coloured.

XXIX. VERNONIA. Receptacle naked; calyx ovate, tiled; florets five cleft; seed down double, the outer chaffy, the inner hair-like.

3. Floscular. Discoid. *Florets all tubular, in heads, not globular, but with a flat disk.*

XXX. BIDENS. Receptacle chaffy, flat; calyx equal, with scales at the base; corolla sometimes with a floret or two in the ray; seed down with two to four erect rough awns.

XXXI. ATHANASIA. Receptacle chaffy; calyx tiled; seed down chaffy, very short.

XXXII. SANTOLINA. Receptacle chaffy; calyx hemispherical, tiled; seed down none.

XXXIII. TARCHONANTHUS. Receptacle woolly; calyx one leaved, cut half way down into seven segments; seeds enveloped in wool.

XXXIV. EUPATORIUM. Receptacle naked; calyx tiled, oblong; seed down hair-like, rugged; style prominent, cloven half way down.

XXXV. CHRYSOCOMA. Receptacle naked; calyx hemispherical, tiled; seed down simple; style scarcely longer than the florets.

XXXVI. CACALIA. Receptacle naked; calyx oblong, with scales at the base; seed down hairy.

XXXVII. AGERATUM. Receptacle naked; calyx oblong, with a double row of leaves; seed down chaffy, with five awns; florets four or five cleft.

XXXVIII. STEVIA. Receptacle naked; calyx cylindrical, of a simple row of leaves; seed down chaffy.

Order Superflua.

1. Discoid. *Florets all tubular, those of the disk perfect, of the ray female, but the latter often obscure or none; all fertile.*

XXXIX. ARTEMISIA. Receptacle somewhat woolly, or almost naked; calyx tiled, with round converging scales; seed down none; florets of the ray awl-shaped, entire, without a corolla.

XL. CARPESIUM. Receptacle naked; calyx tiled, outer scales reflected; seed down none.

XLI. TANACETUM. Receptacle naked; calyx hemispherical, tiled; seeds crowned with a border; florets of the ray three cleft, sometimes wanting.

XII. BACCHARIS. Receptacle naked; calyx tiled, cylindric; seed down hairy; the female florets mixed with the perfect florets.

XLIII. CONYZA. Receptacle naked; calyx tiled, somewhat round; seed down simple; florets of the ray three cleft.

XLIV. GNAPHALIUM. Receptacle naked; calyx tiled, its inner scales rounded, coloured, skinny; seed down hairy or feathery.

XLV. XERANTHEMUM. Receptacle chaffy; calyx

tiled, its inner scales forming a coloured, spreading, skinny ray; seed down chaffy, bristly.

XLVI. ANACYCLUS. Receptacle chaffy; calyx tiled, hemispherical; seed down none; seeds in the ray membranaceous, notched.

XLVII. PERDICIUM. Receptacle naked; down hair-like, rough; florets two lipped.

2. Radiate. *Florets of the disk or centre tubular, perfect; of the ray strap-shaped, female; all fertile.*

XLVIII. MADIA. Receptacle naked; seed down none; calyx double, the outer of eight or ten equal leaves, longer than the inner one, which is composed of many leaves.

XLIX. BELLIS. Receptacle naked, conical; calyx hemispherical, with equal scales; seeds ovate, with no down.

L. CHRYSANTHEMUM. Receptacle naked; calyx hemispherical, tiled; scales dilated at the edge, membranaceous; seed down none.

LI. PYRETHRUM. Receptacle naked; calyx hemispherical, tiled with sharpish scales, bordered with a membrane, seed crowned with a membranous margin.

LII. DORONICUM. Receptacle naked; scales of the calyx equal, in two rows, longer than the disk; seed down simple; seeds of the ray without down.

LIII. ARNICA. Receptacle naked; leaves of the calyx equal; florets of the ray with the united filaments often without anthers; seed down simple.

LIV. INULA. Receptacle naked; calyx tiled; seed down simple; florets of the ray numerous, linear; anthers with two bristles at the base.

LV. ERIGERON. Receptacle naked; calyx tiled; seed down simple; florets of the ray linear, very narrow, numerous, erect.

LVI. SOLIDAGO. Receptacle naked; calyx tiled with converging scales; seed down simple; florets of the ray about five.

LVII. CINERARIA. Receptacle naked; calyx cylindrical, simple, many leaved, equal; seed down simple, copious.

LVIII. SENECIO. Receptacle naked; calyx cylindrical, many leaved, equal, scaly at the base; scales dead at the tip; seed downy, simple.

LIX. TUSSILAGO. Receptacle naked; calyx simple, many leaved, equal, as long as the disk, somewhat membranaceous, swelling at the base; seed down simple.

LX. ASTER. Receptacle naked; calyx tiled; lower scales spreading; seed down simple; florets of the ray more than ten.

LXI. BELLUM. Receptacle naked; calyx with equal leaflets; seeds downy, conical, with a chaffy eight leaved crown, and awned.

LXII. DAHLIA. Receptacle chaffy; calyx double, the outer of many leaves, the inner one leafed in eight segments; seed down none.

LXIII. TAGETES. Receptacle naked; calyx simple, of one leaf, tubular, with five teeth; seed down of several erect pointed scales; florets of the ray five, permanent.

LXIV. HELENIUM. Receptacle naked; that of the ray chaffy; calyx of one leaf, in many deep segments: seed down with five awns; florets of the ray three cleft.

LXV. BOLTONIA. Receptacle honey-combed, hemispherical; calyx tiled with linear scales; seeds obscurely toothed, two horned; florets of the ray several.

LXVI. SIGESBECKIA. Receptacle chaffy; outer calyx of five leaves, inner calyx spreading; seed down none; florets of the ray on one side only of the disk.

LXVII. ANTHEMIS. Receptacle chaffy; calyx hemispherical, with the scales almost equal; seed crown a slight rim; florets of the ray more than five, oblong.

LXVIII. ACHILLEA. Receptacle chaffy; calyx ovate, tiled with unequal scales; seed down none; florets of the ray five to ten, unequal, roundish.

LXIX. BUPHTHALMUM. Receptacle chaffy; calyx tiled; seeds crowned with a toothed or gashed

margin, with sharp edges, particularly those of the ray.

LXX. SANVITALIA. Receptacle chaffy; calyx tiled, with ovate concave scales; seeds of the disk winged; the membrane disappearing in the seeds approaching the ray; seeds of the ray crowned with three bristles.

LXXI. ZINNIA. Receptacle chaffy; calyx tiled, somewhat ovate; seed down of two erect unequal awns; florets of the ray from five to ten, permanent, entire.

Order Frustanea.

1. *Florets of the disk perfect, fertile; of the ray imperfect, abortive.*

LXXII. CENTAUREA. Receptacle bristly; down simple; florets of the ray funnel-shaped, irregular, longer than those of the disk, abortive.

LXXIII. ZOEGEA. Receptacle bristly; calyx tiled; seed down of simple bristles; florets of the ray strap-shaped.

LXXIV. RUDBECKIA. Receptacle chaffy, conical; calyx with a double row of scales; seed crowned with a four-toothed border.

LXXV. COREOPSIS. Receptacle chaffy; calyx double, both many leaved; seeds compressed, crowned with a two or three horned border.

LXXVI. HELIANTHUS. Receptacle chaffy, flat; calyx tiled, somewhat rugged; seed crown of two leaves.

Order Necessaria.

1. *Florets of the disk tubular, to appearance perfect, but commonly abortive; florets of the ray strap-shaped, female, fertile.*

LXXVII. BALTIMORA. Receptacle chaffy; calyx cylindrical, many leaved; seed down none; florets of the ray five.

LXXVIII. OTHONNA. Receptacle naked; calyx of one leaf nearly cylindrical, many cleft; seed down none.

LXXIX. CALENDULA. Receptacle naked; calyx many leaved, equal; seed down none; seeds in the circumference of the disk membranous, inversely heart-shaped, in the ray oblong, curved.

LXXX. IVA. Receptacle hairy; calyx three leaved; seeds naked, obtuse; florets of the ray five; styles two, long.

LXXXI. FILAGO. Receptacle chaffy, cylindrical; calyx tiled; seed down none; the female florets placed among the scales of the calyx.

LXXXII. MICROPUS. Receptacle chaffy; calyx double; seed down none; florets of the ray none; female florets inclosed by the scales of the inner calyx.

LXXXIII. POLYMNIA. Receptacle chaffy; calyx

double, the outer one of four or five leaves, the inner one of ten concave leaves ; seed down none.

LXXXIV. PARTHENIUM. Receptacle chaffy, flat; calyx five leaved; seeds obovate, naked; down none; florets of the ray five.

LXXXV. SILPHIUM. Receptacle chaffy; calyx rugged; seeds compressed, inversely heart-shaped, bordered; the down bordered with two horns.

Order Segregata.

1. *The common calyx containing many small calyxes, each bearing flowers, one or several.*

LXXXVI. ECHINOPS. Receptacle bristly; partial calyx single flowered; florets tubular, all perfect; seed down indistinct.

CLASS XIX.

SYNGENESIA.

Order Aequalis.

1. SCOLYMUS, from σκολος, a sort of thorn, in allusion to its spiny leaves. Nat. ord. Linn. Composite. Juss. Cichoraceæ. 3 Species.

1. S. Maculatus. *Annual Golden Thistle.* " Stem winged, toothed; upper leaves even, nearly smooth;

flowers from the forks of the branches ;" stem branched, three feet high, winged with a leafy border, in several rows, furnished with spinous teeth ; radical leaves obovate, lyrate, roughish, border spiny ; stem leaves sessile, recurved, wing-cleft, spinous ; flowers solitary, of a golden yellow. July, August. South of Europe. 1633. A.

2. *S. Hispa'nicus. Perennial Golden Thistle.* " Leaves rough with minute bristles, decurrent, the mid-rib hairy ; flowers at the ends of short leafy branches ;" leaves very rough, strongly decurrent ; flowers numerous, yellow, closely guarded by the long spiny leaves ; stem not so much branched as the former ; the leaves, stalks, and root are eaten in Spain in the same manner as Cardoon. July to September. South of Europe. 1658. P.

II. *CICHO'RIMUM*, said by Pliny to be an Egyptian name, by others derived from οἴω, to go, and χωρός, a field, because readily found. Nat. ord. *Linn.* Compositæ. *Juss.* Cichoraceæ. 5 Species.

1. *C. In'tybus. Wild Endive, or Succory.* " Flowers in pairs, sessile ; leaves runcinate ;" stem about two feet high, erect, angular ; flowers axillary, blue, sometimes white ; calyx leaves with a rough keel. June to August. Britain. P.

2. *C. Endi'via. Broad-leaved Succory, or Common Endive.* " Flower-stalks axillary, in pairs, one stalk lengthened, bearing a single flower, the other stalk

short and four flowered; flowers in heads; leaves oblong, somewhat toothed; branches zigzag;" stem simple, channelled; leaves alternate; flowers pale blue. The variety commonly cultivated has curled leaves. July, August. East Indies. 1548. A.

3. C. Spino'sum. *Prickly Endive.* "Flowers axillary, solitary; stem forked; branches naked, thorny; leaves lanceolate, runcinate, toothed;" stem a span high; flowers blue, chiefly in the forks of the stem, sometimes terminal; florets few. July, August. Candia. 1633. B.

The first species has been long cultivated in Italy as an excellent fodder for cattle, and when blanched is used in soups and salads; in England, Endive is more generally preferred, but even that is much less esteemed here than in France, where its consumption in ragouts, salads, pickles, and made dishes is truly prodigious.

III. CATANAN'CHE, from *κατάνα*, and *ἄγχη*, violence, it once being supposed a philtre or love charm. Nat, ord. Linn. Compositæ. Juss. Cichoraceæ. 3 Species.

1. C. Cæru'lea. *Blue Catananche.* "Calyx scales awl-shaped, dagger pointed, coloured in the middle; leaves woolly, linear, a little wing-cleft at the base;" stems about two feet high, pubescent; flowers terminal, blue, on long stalks. July to October. South of Europe. 1596. P.

2. C. Lu'tea. *Yellow Catananche.* "Lower calyx

scales lanceolate; leaves lanceolate, three nerved, toothed; stems two or three, a foot and a half high; flowers small, yellow, on slender stalks. June, July. Candia. 1640. A.

IV. SERI'OLA, said to be a diminutive of σιρίς, the ancient appellation of Succory, which this genus resembles. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 4 Species.

1. S. Læviga'ta. *Smooth Seriola.* "Herb smoothish; leaves obovate, toothed;" stem none; leaves radical, in a circular cluster, stalked, smooth, decurrent; flower-stalks erect, slender, a little streaked, mostly single flowered; flowers yellow: a plant, and with its congeners rarely seen, unless in botanic gardens. July, August. Candia. 1772. A.

V. HYPOCHÆ'RIS, from υπό, under, and χειρος, a hog, swine delighting in these plants. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 5 Species.

1. H. Helve'tica. *One-flowered Cat's Ear.* "Stem simple, leafy, one flowered; leaves lanceolate, toothed;" stem a span high, scored, hairy; florets numerous, long, deep yellow; calyx hairy: a favourite plant with Alpine botanists. June, July. The Alps. 1799. P.

VI. ANDRY'ALA, from ανδρός, of a man, and αλη, error, probably from the difficulty of distinguishing

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scales lanceolate; leaves lanceolate, three nerved, toothed; stems two or three, a foot and a half high; flowers small, yellow, on slender stalks. June, July. Caudia. 1640. A.

IV. SERIOLA, said to be a diminutive of *σίρις*, the ancient appellation of Succory, which this genus resembles. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 4 Species.

1. S. Lævigata. *Smooth Seriola.* "Herb smoothish; leaves obovate, toothed;" stem none; leaves radical, in a circular cluster, stalked, smooth, decurrent; lower-stalks erect, slender, a little streaked, mostly

these plants from others of the same class. Nat. ord. *Linn.* Compositæ. *Juss.* Cichoraceæ. 6 Species.

1. A. *Lana'ta.* *Woolly Andryala.* "Leaves ovate, woolly, lower ones somewhat toothed; corymbus terminal; flower-stalks commonly two flowered;" stems about two feet high, with a leaf at each joint; flowers large, yellow; the whole plant white. This is the only species which will bear the winter without the protection of a green-house. May, June. South of Europe. 1732. P.

VII. **GEROPO'GON**, from *γέρων*, an old man, and *πυρων*, a beard, alluding to the long hoary down of the seed. Nat. ord. *Linn.* Compositæ. *Juss.* Cichoraceæ. 3 Species.

1. *G. Gla'ber.* *Smooth Geropogon, or Old Man's Beard.* "Leaves smooth;" stem branched, a foot and a half high; leaves alternate, clasping, long, grassy; each branch terminated by a small pale pink flower; herb abounding with bitterish milky juice. July, August. Italy. 1704. A.

2. *G. Calycula'tus.* *Perennial Geropogon, or Old Man's Beard.* "Calyxes double;" stems several, branched; flowers terminating, nodding before they are opened; leaves linear, acute; both inner and outer calyx of about eight leaves; corolla yellow on both sides. June to August. Italy. 1774. P.

VIII. **TRAGOPO'GON**, from *τράχος*, a goat, and

πάρις, a beard, on account of its long down. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 12 Species.

1. *T. Praten'sis*. *Common Goat's Beard*. "Calyx nearly as long as the corolla; leaves keeled, pointed, dilated at the base; flower-stalk round;" plant smooth, branched, erect; stem leafy, often purplish; leaves alternate, entire, tapering; stalks bearing one very large bright yellow flower, opening in a morning and closing at noon. May, June. Britain. B.

2. *T. Porrifolius*. *Purple Goat's Beard*. "Calyx almost twice as long as the corolla; florets tapering, abrupt; leaves straight; flower-stalks swelling upwards;" stem four or five feet high; leaves slightly wavy; flowers purple violet, with black anthers. May, June. England. B.

The latter species is cultivated in the gardens of the opulent, the roots being esteemed a delicacy, and known by the name of Salsafie; they have an agreeable flavour when dressed with cream, but were more esteemed when esculent vegetables were fewer in England. Linnaeus relates that by way of experiment, he sprinkled the stigmas of *T. Pratensis* with the pollen of *T. Porrifolius*, and obtained a mule partaking of the nature of both parents, the progeny had purple flowers, yellow at the base, decidedly evincing the correctness of his theory of the generation of plants.

IX. ARNOPO'GON, from *ἀρνός*, a lamb, and *πάρις*, a beard, alluding to the soft, dense woolliness of the

seed down. Nat. ord. *Linn.* Compositæ. *Juss.*
Cichoraceæ. 4 Species.

1. *A. Dalecham'pii.* *Great-flowered Sheep's Beard.*
“ Calyx finely downy, without bristles; leaves runcinate, toothed;” stem a span high, leafy, roughish, purple at the base; leaves runcinate, oblong; flowers two inches wide, pale yellow, purple beneath, solitary, on long terminal stalks; calyx even, downy; florets hairy on the back. June to October. South of France. 1736. P.

2. *A. Picro'ides.* *Prickly-capped Sheep's Beard.*
“ Calyx hairy, with prominent bristles; leaves toothed, the upper leaves jagged, dilated at the base, clasping the stem;” flowers several, bright yellow, not half the size of the former, on long bristly stalks. July to August. South of Europe. 1683. A.

x. *Pi'CRIS,* from *πίκρος*, bitter. Nat. ord. *Linn.* Compositæ. *Juss.* Cichoraceæ. 6 Species.

1. *P. Echio'ides.* *Bristly Ox Tongue.* “ Outer calyx of five broad prickly leaves; down stalked; leaves waved;” stem two or three feet high, branched, thickly beset with prickles; lower leaves lanceolate, upper heart-shaped; flowers rather large, bright yellow. In some writers this plant stands as *Helminthia Echioides*; when young the leaves may be used as a pot-herb. July. Britain. A.

xi. *SCORZONE'RA,* a barbarous word, supposed

to be derived from *escorso*, the Catalan name of the Viper. Nat. ord. *Linn. Compositæ. Juss. Cichoraceæ.* 32 Species.

1. *S. Hispa'nica.* *Garden Viper's Grass, or Common Scorzonera.* "Leaves lanceolate, undivided, smooth, minutely serrated, clasping the branched stem;" roots perennial, long, cylindrical; stem branched, leafy, three or four feet high, smooth, furrowed; leaves pointed, pale, glaucous; flowers yellow, solitary, terminal: whole plant milky. June to September. Spain. 1576. P.

The roots of this species are white within, but covered with a dark brown skin; they are sometimes cultivated for the table, and when dressed with cream, make a delicate though rather insipid dish. The rest of the species not possessing much beauty, are never cultivated unless in gardens professedly botanic.

XII. CRE'PIS, from *κρηπίς*, a shoe, though any sort of resemblance is not easy to trace out. Nat. ord. *Linn. Compositæ. Juss. Cichoraceæ.* 32 Species.

1. *C. Ru'bra.* *Purple Crepis, or Hawk Weed.* "Root leaves lyrate, runcinate; stem leaves lanceolate, clasping, lower ones wing-cleft; calyx hispid, outer scales skinny;" stems a foot high, scored, but little branched; flowers of a delicate red colour, terminal, solitary. June, July. Italy. 1632. A.

2. *C. Barba'ta.* *Purple-eyed Succory Hawk Weed.* "Leaves elliptic, lanceolate, toothed; outer scales

of the calyx longer than the inner calyx; scales bristly, scattered;" stems branched, downy, leafy, repeatedly subdivided at the top in a corymbose manner; flowers terminal, of a pale lemon-colour; the central florets dark purplish chocolate, forming an eye. June, July. South of France. 1620. A.

The rest of the species of this genus, like so many others of the class Syngenesia, though sufficiently numerous, yet having but little beauty, are rarely seen in English gardens.

XIII. CHONDRIL'LA, from $\chi\sigmaνδρος$, a cluster. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 3 Species.

1. C. Jun'cea. *Common Gum Succory.* "Root leaves runcinate; stem leaves linear, entire;" stems two or three feet high, branched, hard, woolly near the bottom, smooth, and scored above; flowers slender, yellow, solitary or in bunches, sessile, or on short stalks. September, October. Switzerland. 1633. P.

XIV. PRENAN'THES, from $\piρνης$, drooping, and $\alphaθος$, a flower, in allusion to the pendulous position of the unexpanded blossoms. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 33 Species.

1. P. Purpu'rea. *Purple-flowered Prenanthes.* "Florets four or five; leaves oblong, lanceolate, toothed, glaucous beneath, heart-shaped, and stem-

clasping at the base;" stem erect, round, slender, leafy, two or three feet high, panicled, many flowered; leaves alternate, horizontal, smooth; flowers very numerous, purplish, drooping, on slender stalks. July to September. Germany. 1658. P.

2. P. Al'ba. *White-flowered Prenanthes.* "Florets numerous; leaves angular, somewhat halbert-shaped, toothed; flowers drooping, clustered, panicled;" stem two or three feet high; flowers numerous, white, with a purple calyx, fragrant. July, August. North America. 1778. P.

3. P. Altissima. *Tall Prenanthes.* "Florets about five; leaves three lobed, stalked, toothed, rough at the margin; clusters axillary; flowers nodding;" stems three feet high; flowers small, pale yellow, sometimes pale purple. This plant has been used in America as an antidote to the bite of the rattle-snake. July, August. North America. 1696. P.

xv. LACTU'CA, from *lac*, milk, because of its milky juice. Nat. ord. *Linn. Compositæ. Juss. Cichoraceæ.* 21 Species.

1. L. Sati'va. *Garden Lettuce.* "Leaves rounded; stem leaves heart-shaped; stem corymbose;" leaves large, frequently wrinkled, palish green; stem strong, two feet high, bearing abundance of small yellow flowers. There is a variety with crisped leaves, another with leaves three cleft. June, July. Native place of growth not known. 1562. A.

2. L. Peren'nis. *Perennial Lettuce.* "Leaves wing-cleft, segments linear, toothed upwards; flowers in a panicled corymbus;" stems strong, several, branched; flowers longish, terminating, on slender stalks, deep purple or blue. June to August. Germany. 1596. P.

The Garden Lettuce has been long celebrated for its cooling and wholesome properties; it contains a great quantity of milky juice, which is of an opiate nature. The varieties, by cultivation, are numerous, such as the Small Cabbage Lettuce, the Dutch, the White Ball, &c. for early spring use; and the Cos and Cilician Lettuces, of taller growth, for summer, the best specimens of which are seen in the London markets, with the inner leaves dense, blanched, crisp and sweet, most excellent as a salad, or for stewing in soups. Other species of this genus are rarely seen in gardens.

XVI. SON'CHUS, from $\sigma\omega\nu\varsigma$, sound, and $\chi\eta\nu$, to pour out, from its milky juice. Nat. ord. *Linn.* Composite. *Juss.* Cichoraceæ. 33 Species.

1. S. Tener'rimus. *Clammy Sow Thistle.* "Flower-stalks downy, somewhat umbellate; calyx hairy; leaves deeply wing-cleft, with parallel oblong segments, the base sometimes arrow-shaped;" flowers yellow. This plant is eaten by the common people of Italy as a salad. July, August. Italy. 1691. A.

2. S. Tingita'nus. *Tangier Sow Thistle.* "Flower-stalks swelling upward, slightly scaly; calyx scales erect, with membranous edges; leaves wing-cleft, toothed, stem-clasping, glaucous, smooth;" flowers

golden yellow, with a purple eye. June to September.
Barbary. 1713. A.

3. S. Plumie'ri. *Plumiers, or Pyrenean Blue Sow Thistle.* "Flower-stalks panicled, smooth, with clasping, long, pointed floral leaves; leaves wing-cleft, runcinate;" stem nearly six feet high, round, branched, scored; leaves from one to two feet long; flowers numerous, large, pale blue. June to August. The Pyrenees. 1794. P.

4. S. Florida'nus. *Smallflowered Florida Sow Thistle.* "Flower-stalks panicled, distantly scaly; leaves somewhat lyrate, minutely toothed, smooth, with a large triangular terminal lobe;" panicle of flowers doubly branched, spreading; flowers very small, blue. This plant is said to be used in America for the bite of the rattle-snake. July. North America. 1713. B.

5. S. Sibi'ricus. *Willow-leaved Sow Thistle.* "Flower-stalks corymbose, with distant lanceolate scales; leaves lanceolate, sessile, the upper ones entire, lower variously toothed;" stem from one to four feet high, leafy, wand-like; leaves numerous; flowers blue, composing a level-topped corymb. July, August. Siberia. 1759. P.

6. S. Tata'ricus. *Tartarian Sow Thistle.* "Flower-stalks nearly naked, in clusters; leaves lanceolate, runcinate;" a plant much resembling the last, but larger; leaves with a white rib and reflected teeth; flowers blue, in compound terminal clusters. June, July. Tartary. 1784. P.

XVII. **HIERACIUM**, from ἱεράξ, a hawk; because that bird is said to sharpen his sight with the juice, Pliny; or perhaps from the mixture of black and yellow in the corolla of some species, resembling a hawk's eye. Nat. ord. *Linn.* Compositæ. *Juss.* Cichoraceæ. 70 Species.

1. **H. Auranti'cum.** *Orange flowered Hawk Weed, Grim the Collier.* "Leaves elliptical, entire; stem nearly leafless, simple, hairy, bearing a corymbus of many flowers;" flowers of a rich orange hue; calyx black, hairy. June, July. Scotland. P.

2. **H. Chondrillo'ides.** *Gum succory Hawk Weed.* "Stem erect, few flowered; stem leaves lanceolate, runcinate, acute; root leaves oblong, undivided," stalked, smooth; flower-stalks axillary, one flowered; flowers yellow; calyx black, hairy, upright. June, July. Austria. 1640. P.

3. **H. Monta'num.** *Mountain Hawk Weed.* "Stem erect, simple, leafy, one flowered; leaves ovate, lanceolate, toothed, sessile;" stem from one to three feet high, furrowed, roughish; the flower yellow, large, handsome; calyx black, shaggy, sometimes tawny. June, July. South of Europe. 1775. P.

4. **H. Au'reum.** *Golden Hawk Weed.* "Flower-stalk nearly naked, single flowered; calyxes hairy; leaves lanceolate, runcinate, toothed, smoothish," all radical; flowers yellow on the inside, saffron-coloured without; calyx brown, upright, rough. This plant

was formerly reckoned a Leontodon. May to July.
Italy. 1769. P.

Of this extensive genus, the first two species are commonly seen in gardens; the rest are only to be met with in botanical collections, and having little beauty to recommend them, not often there, being usually considered as weeds. We have no less than eighteen British species, some of which are not destitute of attraction.

XVIII. LAP'SANA, from λαπάζω, to purge; on account of its laxative qualities. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 5 Species.

1. L. Zacin'tha. *Warted Nipple Wort.* "Calyx of the fruit swelling, depressed, blunt, sessile;" stem leafy, round, branched, a foot and half high; leaves runcinate, smooth; flowers small, yellow. This plant is erected into a new genus, with the name of Zachinta Verrucosa. June, July. South of Europe.

1633. A.

2. L. Stella'ta. *Starry Nipple Wort.* "Seeds awl-shaped, spreading, somewhat curved, embraced by the prickly calyx scales; stem widely spreading; radical leaves obovate, somewhat runcinate;" upper leaves linear, lanceolate, entire; flowers small, yellow, on long stalks. June, July. South of France.

1633. A.

3. L. Rhagadi'olus. *Bird's foot Nipple Wort.* "Seeds few, awl-shaped; widely spreading, some-

what recurved, embraced by the smooth calyx scales ; stem spreading ; radical leaves deeply runcinate, with rounder lobes ;" flowers dark yellow. This plant also has been removed from Lapsana, and arranged as Rhagadiolus Edulis. June, July. The Levant.

1683. A.

XIX. HYOSERIS, from *υἱς νοἱς*, a hog, and *σπις*, a sort of lettuce ; swine being fond of it. Nat. ord. Linn. Compositæ. Juss. Cichoraceæ. 8 Species.

1. H. Hedyp'nois. *Branching Hyoseris.* "Stem branched, diffuse ; leaves oblong, toothed, narrowed at the base, sessile ; scales of the calyx when in fruit smooth ;" stem jointed, at each joint a leaf ; flower small, yellow, nodding. June. Montpelier. 1683. A.

The plants of these last two genera are seldom seen ; much uncertainty has arisen in arranging the various species, authors not being agreed on their generic character, which indeed are sufficiently obscure, and the plants themselves have small beauty. These remarks are also applicable to some other common plants of this class and order, not here inserted ; as the genera Arctium, Apargia, Leontodon, Hedypnois, &c.

XX. ATRAC'TYLIS, from *ατράκτως*, a spindle. Nat. ord. Linn. Compositæ. Juss. Cinaro-cephalæ. 2 Species.

1. A. Gummi'fera. *Gummy rooted Atractylis, or Distaff Thistle.* "Stemless ; leaves wing cleft ; outer

leaflets of the calyx three pointed," armed with spines on their edges; florets of the border white, of the centre yellowish; the root abounds with a gummy matter, which occasions it to be chewed for the same purposes as mastich. June to August. South of Europe. 1640. P.

2. A. Hu'milis. *Dwarf Atractylis.* "Leaves toothed, sinuate; flower radiated; outer calyx expanding; stems herbaceous;" leaves indented, spinous on the edge; flowers purple, in heads on the branches. June, July. Spain. 1759. P.

3. A. Cancella'ta. *Netted Atractylis.* "Stem branching; leaves lanceolate, toothed, fringed, pubescent; outer leaves of the calyx bristly, pinnate, larger than the flower," and curiously netted; flowers purple, in heads like a thistle; stem nine inches high; branches slender. June, July. South of Europe. 1640. A.

XXI. SERRATULA, from the finely serrated leaves of the most common species. Nat. ord. *Linn.* Compositæ. Juss. Cinaro-cephalæ. 20 Species.

1. S. Tincto'ria. *Common Saw Wort.* "Leaves sharply serrate, somewhat fringed, more or less wing cleft in the lower part; corymb level-topped; florets uniform; seed down fringed;" stem about two feet high, not much branched; leaves alternate; flowers red, sometimes white. July to October. Britain. P.

2. S. Corona'ta. *Siberian Saw Wort.* "Leaves

sharply serrate, somewhat fringed, deeply wing cleft; corymb level topped; florets of the circumference female, longer than the rest;" a plant resembling the former, but thrice as large. July, August. Siberia.

1739. P.

3. S. Alpi'na. *Alpine Saw Wort.* "Leaves cottony, and white beneath, toothed, pointed, egg lance-shaped; flowers corymbose; calyx clothed with soft hairs;" stem from three inches to a foot high, simple, leafy, cottony; calyx leaves brown, soft, hairy; florets pink, with blue or violet anthers; leaves various, from lanceolate to heart-shaped. July, August. Britain. P.

One species of this genus, S. Arvensis, or the Creeping Thistle, is the greatest of pests in arable lands, and scarcely to be eradicated. Some American species, which do not ripen seed here, were formerly seen in curious gardens, but are hardly now to be found.

xxii. CAR'THAMUS, from *καθαίρω*, to purge; on account of its cathartic qualities. Nat. ord. Linn. Compositæ. Juss. Cinaro-cephalæ. 16 Species.

1. C. Tinctorius. *Bastard Saffron, or Safflower.* "Stem smooth; leaves ovate, entire, spinous, toothed; seeds naked;" stem about two feet high, erect, branched near the top; leaves simple, acuminate, veined, with spinous teeth at their edge; flowers large, saffron-coloured; seeds white, naked. June, July. Egypt. 1551. A.

2. C. *Lana'tus*. *Woolly Carthamus, or Yellow Distaff Thistle.* "Stem woolly; lower leaves wing-eleft, toothed, upper ones embracing the stem;" stem two feet high, cylindrical, branched at top; flowers yellow, solitary; outer scales of the calyx prickly. Its stalks are used by women for distaffs, whence its name. July, August. South of Europe. 1596. A.

3. C. *Cre'ticus*. *Cretan Carthamus.* "Stem nearly even; calyxes a little woolly; florets about nine; lower leaves lyrate, upper ones half embracing the stem, toothed;" stem about four feet high, white; leaves stiff, deeply indented, armed with strong spines; flowers whitish, with five black lines at the openings. June, July. Candia. 1731. A.

4. C. *Cœru'leus*. *Blue flowered Carthamus.* "Stem generally one flowered; leaves lanceolate, spinous, toothed;" stem single, purplish, hairy; leaves downy; flowers blue; outer calyx broad, with sharp spines, inner calyx narrow and spiny. June, July. Spain. 1640. P.

5. C. *Mitis'simus*. *Small Carthamus.* "Leaves not spinous; radical leaves toothed; stem leaves pinnate," commonly stemless; leaves spreading on the ground; flowers large, bright blue; calyx large; outer scales leafy, spinous; sometimes with a stem about four inches high. June, July. France. 1776. P.

6. C. *Carduncellus*. *Mountain Carthamus.* "Stem leaves linear, pinnate, the length of the plant, the-

ends spiny ;" stems several, about six inches high, simple, sometimes a little woolly ; flower blue, large, terminal ; outer scales of the calyx leafy, inner ones smooth. The root is eaten in Africa. May, June. South of France. 1734. P.

The first species has been cultivated in Egypt from the earliest ages, for the use of dyers ; the florets are collected and prepared in somewhat the same way as saffron ; they give out a beautiful, but somewhat fugitive rose-colour. A red pigment is likewise prepared from the stamens, used by painters, and known as a cosmetic rouge by the Parisian ladies, under the name of Spanish Vermilion, or Lake of Carthamus. In Spain, the florets are used to give a colour to soups, olios, and other messes, as marigolds are in England. The seeds have a cathartic quality ; they are a favourite food of parrots, and also of geese and turkies. An attempt was made, so long back as the year 1551, to cultivate the plant in England, on a large scale, but with no great prospect of success, the wetness of the climate injuring the quality of the flowers.

XXIII. CARLI'NA, from *Carolus*; the army of Charlemagne being said to be cured of the plague by the use of the root. Nat. ord. Linn. Compositæ. Juss. Cinaro-cephalæ. 12 Species.

1. C. Acau'lis. *Dwarf Carline Thistle.* " Stem simple, one flowered, sometimes stemless ; leaves wing-cleft, naked ; segments cut, toothed, spinous," spreading widely on the ground, cottony, and white

on both sides; flower from four to six inches in diameter; florets greenish yellow, the outer one whitish. June. Italy. 1640. P.

2. C. Lana'ta. *Woolly Carline Thistle.* " Stem often two cleft; the intermediate flower sessile; leaves hoary, lanceolate, toothed, spinous;" whole plant whitish, and a little cottony; stem a span high, leafy; leaves oblong, edged with yellowish spines; florets purple. June, July. South of Europe. 1683. A.

3. C. Corymbo'sa. *Corymbed Carline Thistle.* " Stem many flowered, smoothish, corymbose; leaves lanceolate, wing-cleft, toothed, smooth;" stem a foot high, reddish, a little cottony; leaves alternate; flowers terminal, from three to five, clustered, yellow. July, August. South of France. 1640. P.

4. C. Vulga'ris. *Common Carline Thistle.* " Stem many flowered; corymbose, downy; leaves lanceolate, toothed, spiny, downy beneath;" stem a foot high, leafy, furrowed; flowers erect, purplish; leaves and flowers often remaining battered and bleached through the whole winter. June to September. Britain. P.

The foreign species of this genus rarely producing good seeds in England, and decaying soon after they flower, are with difficulty preserved, and consequently not often met with.

xxiv. CYNA'RA. Linnaeus says from *xvii*, a dog; others, *a cinere*, ashes, from the ash-coloured hue of

its leaves. Nat. ord. *Linn.* Compositæ. Juss. Cinarocephalæ. 8 Species.

1. *C. Scolymus.* *Common Artichoke.* "Leaves somewhat spiny, pinnate, undivided; calyx scales ovate;" stem from three to six feet high, thick, strong, scored; root leaves from two to four feet long; stem leaves nearly entire; flowers terminating, on thick fleshy stalks; heads globular, dusky purple; scales thick and fleshy at the base, notched at the tip; florets blue or purple. Var. 1. *The French Artichoke,* heads less fleshy, and of a greener colour, scaled, bent in at top. August, September. South of Europe. 1548. P.

2. *C. Cardunculus.* *Cardoon Artichoke.* "Leaves spiny, all wing cleft; scales of the calyx ovate;" stem four feet high, upright, thick, cottony, a little branched, spinous near the top; leaves large, cottony beneath, upper ones decurrent; flowers blue, terminal, smaller than the last; by some thought only a variety. August. Candia. 1658. P.

The Artichoke has been long cultivated in England as an agreeable esculent. It is boiled in salted water; the ends of the scales of the calyx are dipped in melted butter, and the fleshy substance sucked from the rest; the bottom, which is a more plentiful part of the viand, is the receptacle of the plant, and the choke consists of the unopened florets and bristles. The French Artichoke has a perfumed taste, not agreeable to many persons. The Cardoon is not often raised in England. The root, stalk, and mid-rib of the leaves are the parts eaten; but so

much depends on the skill of the cook to render them palatable, that they are almost confined to the tables of the upper ranks.

xxv. *Cni'cus*, from *κνίζω*, to cut or prick; on account of its thorny leaves. Nat. ord. *Linn.* Compositæ. *Juss.* Cinaro-cephalæ. 53 Species.

1. *C. Acar'na*. *Yellow Cnicus*. "Leaves decurrent, lanceolate, grey, toothed, spiny; flowers aggregate, involucred; scales of the calyx lanceolate, the lower terminated by a pinnate spine;" stem a foot and a half high, erect, winged, branched; leaves whitish; flowers purple, clustered; calyx woolly; spines yellowish. July to September. Spain. 1683. A.

2. *C. Fe'rox*. *Prickly Cnicus*. "Leaves somewhat decurrent, wing cleft; segments two lobed; the margin and upper surface thorny, the under downy; calyxes hemispherical, involucred; scales awl-shaped, spiny, spreading;" flowers large, purple. July, August. South of Europe. 1683. B.

3. *C. Erio'phorus*. *Woolly headed Cnicus, Friar's Crown*. "Leaves sessile, wing cleft, hairy; segments in two ranks, pointing two ways, thorny; calyxes globose, woolly, cob-webbed; scales oblong, with a reflexed tooth at the apex;" leaves spreading, alternate; flowers purple or white, large, terminal, solitary; stem three feet high, much branched. July, August. Britain. B.

4. *C. Heterophyl'lus*. *Melancholy Thistle*. "Leaves

embracing the stem, heart lance-shaped, fringed, woolly beneath, the lower leaves somewhat cut; scales of the calyx lanceolate, adpressed;" stem three feet high or more, round, furrowed, woolly, one or two flowered; flower purple, terminating, nodding at first, large; leaves occasionally wing cleft, whence its specific name. July, August. Britain. A.

5. C. Casabo'næ. *Fish Thistle, or Cnicus.* "Leaves sessile, narrow, lanceolate, entire, flat, downy beneath, armed with triple spines on the edge; flowers axillary, sessile, in a kind of spike; calyx scales lanceolate, spreading, spinous;" stem upright, whitish or reddish, leafy; leaves acute, smooth, yellowish beneath; flowers purple, in clusters. June to August. South of Europe. 1714. B.

xxvi. CAR'DUUS, from *cardinalis*, belonging to a hook; the scales of the calyx being armed with spines. Nat. ord. *Linn.* Compositæ. Juss. Cinarocephalæ. 36 Species.

1. C. Carlinoi'des. *Pyrenean Thistle.* "Leaves decurrent, wing cleft, woolly; segments palmate, thorny; flowers glomerate;" stem a foot and a half high, branched, woolly; branches axillary, alternate; flowers four to eight, purple; calyx scales loosely tiled, the inner ones purplish. August. The Pyrenees. 1784. B.

2. C. Maria'nus. *Common Milk Thistle, Our Lady's Thistle.* "Leaves stem-clasping, wing cleft,

halbert-shaped, thorny; calyx leafless, bent back, prickly at the margin;" stem five or six feet high, branched, furrowed, smooth; leaves large, deep green, variegated with white veins; stem leaves alternate, oblong; flowers purple, solitary, large, on naked stalks. July, August. Britain. A.

3. C. Deflora'tus. *Various leaved Thistle.* "Leaves decurrent, lanceolate, serrate, somewhat spiny, fringed, naked; flower-stalks very long, downy, one flowered;" whole plant smooth; stems many, winged at bottom, naked at top, generally simple; leaves dark green; flowers of a fine red, often drooping as the seeds ripen. July to September. France. 1570. P.

Most of the species of this and the preceding numerous genus, are considered as plants rather to be eradicated, than encouraged. Botanists have differed in arranging them: the authority of the Kew Catalogue is here followed, agreeing with Willdenow. Few of the tribe are seen in gardens, yet the larger sort are really very spacious plants. *Cnicus Eriophorus* is sometimes called the Scotch Thistle, and grows to a very large size. *Cnicus Heterophyllus* was cultivated by quacks, who pretended to cure madness by its use, and hence its name of melancholy Thistle. *Carduus Marianus*, was eaten when young as a salad, and the stalks and leaves were boiled as a pot herb when esculent vegetables were more scarce in England; the scales of the calyx also may be eaten, like those of the Artichoke, or at least they will serve to lick up the melted butter; the plant was held in much veneration in the middle ages, as its white veins were supposed to

be derived from the milk of the Virgin, which dropped accidentally upon it. The whole plant is however cooling, and the seeds have been prescribed in emulsions for pectoral diseases, with good effect.

XXVII. ONOPOR'DUM, from ὄνος, an ass, and ὑπόδω, to crepitate; it being a carminative to that animal, Pliny. Nat. ord. Linn. Compositæ. Juss. Cinarocephalæ. 10 Species.

1. **O. Acan'thium.** *Cotton Thistle, or Woolly Onopordum.* "Calyx scales spreading every way, awl-shaped; leaves ovate, oblong, waved, woolly on both sides;" stem erect, five feet high, branched, winged, with decurrent spinous leaves; flowers terminal, solitary, erect, purple, handsome. July, August. Britain. B.

2. **O. Illy'ricum.** *Illyrian Cotton Thistle.* "Lower calyx scales reflected, upper much spreading; leaves decurrent, downy, sinuated, deeply toothed, spinous;" stem six or seven feet high, branched from the base, winged, spinous; leaves long, narrow; flowers purple. July, August. South of Europe. 1648. B.

3. **O. Ara'bicum.** *Arabian Onopordum.* "Calyx scales ovate, dagger-pointed, adpressed; leaves decurrent, rather downy, sinuate, toothed, spinous;" stem six to eight feet high, erect, angular, hollow, branched; leaves lanceolate, sharply spinous, veined, and covered on both sides with woolly down; flowers

erect, stalked, solitary, large, purple. July. South of Europe. 1686. B.

4. O. Acau'lon. *Dwarf Onopordum*. "Stem scarcely any; calyx globose, nearly sessile; scales lanceolate, spinous, spreading; leaves stalked, wing cleft, toothed, spinous, downy;" stem simple, two inches long, terminated by a sessile, red and white flower; leaves clustered, of a glaucous hue. July, August. Greece. 1739. B.

The remarks made upon the two preceding genera are nearly applicable to the present genus; the first species is esculent, in the same way as *Carduus Marianus*.

XXVIII. LIA'TRIS, a name whose meaning or origin is not discovered. Nat. ord. *Linn. Compositæ*. Juss. *Cinaro-cephalæ*. 8 Species.

1. L. Squarro'sa. *Rough cupped Liatris*. "Leaves linear, entire, rough; flower-stalks axillary, one flowered; scales of the calyx lanceolate, rigid, spreading;" stems several, from two to three feet high; leaves alternate, reflexed; heads of flowers rugged; florets purple. July, August. Virginia. 1732. P.

2. L. Scario'sa. *Skinny cupped Liatris*. "Leaves lanceolate, entire, tapering at each end, rough edged; flowers on long stalks, with floral leaves;" calyx scales obovate, spreading; stem three or four feet high, leafy, finely hairy, branching at the upper part;

flowers in a cluster, purple. September, October.
Virginia. 1739. P.

3. L. Pilo'sa. *Hairy-leaved Liatris.* "Leaves linear, hairy, somewhat dotted; cluster of flowers long, loose, hairy; floral leaves and calyx scales obtuse, fringed;" stem three feet high, slender, leafy, angular; florets and stigmas pink. September, October. North America. 1783. P.

4. L. Spica'ta. *Spiked Liatris.* "Leaves linear, entire, distantly dotted, fringed at the base; spike leafy, dense above; calyx scales obtuse, smooth;" stem smooth, three feet high; flowers red, purple, somewhat tiled, on short stalks. August to October. North America. 1732. P.

This genus and the next were originally united with *Serratula*, but their habit is different; they are sometimes seen in curious gardens, and are by no means destitute of beauty.

XXIX. VERNO'NIA, in memory of William Vernon, who botanized in Maryland, the century before the last. Nat. ord. *Linn. Compositæ. Juss. Cinarocephalæ.* 4 Species.

1. V. Noveboracen'sis. *Long-leaved Vernonia.* "Leaves lanceolate, rough, finely serrate; corymb level topped; calyx scales with slender points;" stem four or five feet high, erect, furrowed, purplish, clothed with abundance of leaves;

flowers numerous, dark purple, turning black in decay. September to November. New York. 1710. P.

2. V. Præal'ta. *Tall Vernonia*. "Leaves lanceolate, downy beneath; corymb level topped; calyx scales ovate, pointed;" a tall rough plant; flowers pale purple, in loose erect bunches; calyx scales with shorter points than the last; leaves more downy beneath, not pendulous. September to November. North America. 1732. P.

xxx. BI'DENS, so named from the seed being terminated by two teeth, or awus. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 20 Species.

1. B. Frondo'sa. *Smooth stalked Bidens*. "Leaves pinnate, serrate, marked with lines, smooth; seeds erect; calyxes leafy, stem polished," three feet high, with horizontal branches, from the ends of which are clusters of yellow flowers. July, August. North America. 1710. A.

2. B. Pilo'sa. *Hairy Bidens*. "Leaves pinnate, somewhat hairy; stem with bearded joints; calyx with a simple involucre; seeds diverging;" upper leaves ternate; awns of the seeds two to five. There is a variety from China, with four awns to the seed, and the exterior florets white. July. North America. 1732. A.

3. B. Bipinna'ta. *Hemlock-leaved Bidens*. "Leaves doubly pinnate, gashed; calyxes involucred; corollas half radiated; seeds diverging;" florets sometimes

destitute of ray, and sometimes with one or two barren florets; seeds with three awns. July, August. North America. 1687. A.

4. B. Bulla'ta. *Rough-leaved Bidens.* "Leaves ovate, serrate, lower ones opposite, upper ones ternate, the middle larger;" stem rough, two feet high; leaves thick, woolly; flowers axillary, and terminating, solitary, subsessile, yellow; calyx surrounded at the base, with five spreading leaves. July to September. North America. 1759. A.

These plants are sometimes admitted into gardens for the sake of variety; but having no great beauty, are not commonly met with.

XXXI. ATHANA'SIA, *αθανασία*, immortality. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 21 Species.

1. A. An'nua. *Annual Anathasia.* "Corymbs simple, contracted; leaves wing cleft, toothed;" stem about nine inches high, branched at top; leaves smooth, cut into segments, like those of buck's-horn plantain; flowers bright yellow, large. July, August. Barbary. 1686. A.

XXXII. SANTOLI'NA, supposed to be a diminutive of *sancta*, meaning a holy little herb; in allusion to some reputed virtues. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 8 Species.

1. S. Cha'mæ Cypris'sus. *Common Lavender*

Cotton. “ Stalks single flowered; leaves toothed four ways; teeth obtuse; branches woolly; calyx downy;” stem much branched and bushy, a foot and a half high; leaves copious, somewhat cylindrical, soft, hoary, with a powerful scent when bruised; flowers deep yellow, flat in the disk. July. South of Europe. 1573. S.

2. S. Rosmarinifolia. *Rosemary-leaved Lavender Cotton.* “ Stalks single flowered; leaves linear, those of the flowering branches plain and entire, those of the barren ones revolute at the edge, beset with scaly tubercles;” flowers larger, more convex than the last, paler yellow; stem shrubby, branched. July to September. Spain. 1683. S.

3. S. Mari'tima. *Sea Cotton Weed.* “ Flower-stalks corymbose; leaves oblong, obtuse, crenate, densely woolly;” whole plant invested with snowy wool; flowers many together, of a golden yellow. July to September. England. P.

XXXIII. TARCHONAN'THUS, from *Tarchon*, an Arabic name for the plant Tarragon, and $\alpha\nu\thetaος$, a flower. Nat. ord. *Linn.* Compositæ. Juss. Corymbiferæ. 6 Species.

1. T. Camphora'tus. *Shrubby African Flea Bane.* “ Leaves elliptic, oblong, nearly entire, densely downy beneath;” a small tree, branches angular, densely downy; leaves scattered, stalked, when bruised of a rosemary-like smell; panicle many flowered; flowers

dark dull purple. June to October. Cape of Good Hope. 1690. Gr. Ho. S.

XXXIV. EUPATO'RIUM, from *Eupator*, a name of Mithridates, king of Pontus, who is supposed to have brought this plant into medical notice. Nat. ord. *Linn. Compositæ. Juss. Corymbiferæ.* 71 Species.

* *Calyxes with three to five florets.*

1. **E. Hyssopifo'lium.** *Hyssop-leaved Eupatorium.*
"Leaves opposite, somewhat whorled, linear, entire, downy, three nerved, dotted; radical leaves somewhat toothed;" stem about three feet high; branches in pairs; flower-stalks long, terminal, sustaining from one to four white flowers. August. North America. 1699. P.

2. **E. Sessilifo'lium.** *Sessile-leaved Eupatorium.*
"Leaves sessile, stem-clasping, distinct, lanceolate, rounded at the base, serrate, smooth; stem smooth," slender, round; leaves in pairs, at two inches distant; flowers terminating, corymbed in many little heads, white, slender. September. Virginia. 1777. P.

3. **E. Rotundifo'lium.** *Round-leaved Eupatorium.*
"Leaves sessile, distinct, somewhat rounded, heart-shaped, obtusely serrate, veined;" stems upright, about a foot high, jointed, at each joint a pair of leaves, light green; flowers in small, loose, terminating panicles, white, with two small leaves under each. July, August. North America. 1699. P.

4. E. Altissimum. *Tall Eupatorium.* "Leaves somewhat sessile, lanceolate, three nerved, tapering at each end, downy; lower leaves serrate in the middle;" stem simple, upright, green, four feet high, at each joint four leaves in whorls, terminated by a close corymb of purple flowers. September. Pennsylvania. 1699. P.

5. E. Trifoliatum. *Three-leaved Eupatorium,* "Leaves stalked, ternate or quaternate; leaflets ovate, tapering at each end, serrate, roughish;" stem upright, six to eight feet high; leaves in whorls, five or seven at each joint; stem terminated by a loose corymb of purple flowers, small. August to October. Virginia. 1768. P.

6. E. Cannabinum. *Common Hemp Agrimony,* "Leaves stalked, digitate; segments lanceolate, serrate;" stems three to six feet high, reddish, branched; leaflets three or five, rough, middle one largest; flowers in thick corymbs; florets five or six, pale red or purple. July to October. Britain. P.

** *Calyxes with six to nine florets.*

7. E. Purpureum. *Purple Eupatorium.* "Leaves stalked, in fours or fives; leaflets egg lance-shaped, wrinkled, veiny, roughish; stem hollow," purplish at the base of the leaf-stalks; corymb terminating; calyx flesh-coloured; corolla whitish; anthers purple. September. North America. 1640. P.

8. E. Maculatum. *Spotted Eupatorium.* "Leaves

stalked, in fours or fives, egg lance-shaped, unequally serrate, downy beneath; stem solid, furrowed," two to three feet high, with many dark spots; leaves rough; flowers purple, terminating in a sort of corymb. August, September. North America. 1656. P.

9. E. *Perfoliatum*. *Perfoliate Eupatorium*. "Leaves connate, perfoliate, woolly;" stems from two to three feet high, hairy; leaves at each joint, rough, lessening to a point, dark green, covered with soft hairs; the upper part of the stalk divides into many slender stalks, each sustaining a close cluster of white flowers. August, September. North America. 1699. P.

10. E. *Cœlestium*. *Blue-flowered Eupatorium*. "Leaves stalked, ovate, cordate, somewhat obtuse, three nerved, obtusely serrate; flowers corymbose;" root creeping; stems about two feet high; flowers in a sort of terminal corymb, of a fine blue. July to November. North America. 1732. P.

11. E. *Aromaticum*. *Aromatic Eupatorium*. "Leaves stalked, ovate, acute, three nerved, obtusely serrate, smooth; stem panicled in the upper part; flowers corymbose; calyxes simple;" stem round, four feet high; leaves somewhat wrinkled; flowers twice the length of the calyx, snow white; florets from eighteen to twenty-eight. July, August. Virginia. 1789. P.

12. E. *Ageratioïdes*. *Ageratum-like Eupatorium*. "Leaves stalked, ovate, acuminate, three nerved, unequally and grossly serrate, smooth; corymb many

flowered, standing out wide ; calyxes nearly simple ;" stems five or six feet high, branched towards the top ; flowers in large tufts, of a pure white. August to October. North America. 1540. P.

Our English species is seldom admitted into gardens, being very common at water sides ; some of the American species are esteemed in their own country on account of their aromatic and tonic qualities, and are known by the name of Fever Root or Fever Weed.

xxxv. **CHYSOCO'MA**, from χρυσος, gold, and κεφαλη, a head of hair. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 15 Species.

1. **C. Linosy'ris.** *German Goldy Locks.* "Herbaceous ; leaves linear, smooth ; calyxes loose ;" stems two feet and a half high, round, stiff ; leaves closely and irregularly set, long, narrow, pale green ; flowers in an umbel, bright yellow : the plant, when handled, yielding a fine smell. September, October. Europe. 1596. P.

2. **C. Biflo'ra.** *Two-flowered Goldy Locks.* "Herbaceous, panicled ; leaves lanceolate, three nerved, dotted, naked ;" root very creeping and spreading ; stems numerous, erect ; leaves acute, rough ; flowers yellow, larger than the preceding species, in loose panicles. August, September. Siberia. 1741. P.

3. **C. Villo'sa.** *Hairy-leaved Goldy Locks.* "Herbaceous ; leaves lanceolate, woolly ; calyxes close ;" leaves quite entire, hoary, alternate, sessile ; flowers

yellow, in a sort of umbel; calyx hairy, August, September. Siberia. 1709. P.

xxxvi. CACA'LIA, from the *κακαλία* of Dioscorides.
Nat. ord. Linn. Compositæ. Juss. Corymbiferæ.
39 Species.

1. *C. Sarace'nica*. *Creeping-rooted Cacalia*. "Stem herbaceous; leaves sessile, oblong, lanceolate, serrate, decurrent;" stem two to three feet high, scored, smooth, leafy, straight; leaves alternate, pointed; flowers yellow, in a terminal corymb. August to October. South of France. 1772. P.

2. *C. Hasta'ta*. *Spear-leaved Cacalia*. "Stem herbaceous; leaves stalked, three lobed, spear-shaped, serrate; flowers in clusters, nodding;" stem mealy; flowers of about five white florets; anthers black; flower-stalks hoary. August to October. Siberia. 1780. P.

3. *C. Suave'olens*. *Sweet-scented Cacalia*. "Stem herbaceous; leaves stalked, spear arrow-shaped, serrate; flowers in corymbs, erect;" stems four or five feet high, scored, leafy; leaves alternate, pointed, smooth; flowers whitish, in a terminal compound corymb. July to September. North America. 1752. P.

4. *C. Atriplicifo'lia*. *Orache-leaved Cacalia*. "Stem herbaceous; leaves stalked; radical leaves heart-shaped, toothed; stem leaves rhomboid, toothed; flowers in erect corymbs;" stems three or four feet

high, round, leafy, a little branched; leaves alternate, glaucous beneath; flowers small, oblong, pale or reddish, in a terminal loose corymbus. August. North America, 1699. P.

5. C. Alpi'na. *Alpine Cacalia.* "Stem herbaceous; leaves stalked, heart-shaped, toothed, smooth; leaf-stalks naked; corymbs level topped; calyxes commonly five flowered;" stem from one to two feet high, leafy, branching; leaves on very long stalks; florets three to five, purple: the plant varies with leaves smooth or woolly, or with white flowers. July, August. Switzerland. 1739. P.

XXXVII. AGERA'TUM, from α , privative, and $\gamma\nu\pi\alpha\varsigma$, old age, never old, evergreen. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 3 Species.

1. A. Conyzoi'des, *Hairy Ageratum.* "Leaves ovate, somewhat heart-shaped; stem hairy," woody, square, reddish, a foot and a half high; leaves opposite, hairy, not unlike those of the nettle; calyx ovate, cylindric, with two or three rows of scales, which spread much when ripe. July, August, America. 1714. A.

XXXVIII. STE'VIA, in memory of Peter James Esteve, an eminent physician and botanist of Valencia towards the middle of the sixteenth century. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 5 Species.

1. S. Pedata. *Compound-leaved Stevia.* "Herbaceous; leaves stalked, pedate, digitate, entire; seed down of several short equal scales;" stem two or three feet high, a little downy, scored; leaflets seven, stalked, egg lance-shaped, roughish; flowers white, small; anthers violet. July to September. Mexico. 1673. A.

Order Superflua.

XXXIX. ARTEMISIA, either from *Ἄρτεμις*, one of the names of Diana, or from Artemisia, the wife of Mausolus, king of Caria. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 71 Species.

* *Stem shrubby, erect.*

1. A. Abrotanum. *Common Southernwood.* "Shrubby; stem stiff, straight; lower leaves twice wing-cleft; upper leaves pinnate, hair-like; calyx pubescent, hemispherical;" stem about three feet high; leaves alternate, stalked, many cleft; leaflets linear, narrow, woolly, roughish, less divided towards the top; flowers in upright spikes, numerous, nodding, yellow, rarely opening in England. August to October. South of Europe. 1548. E. S.

2. A. Arborescens. *Narrow-leaved Tree Wormwood.* "Leaves thrice wing-cleft, silky, ash-coloured; leaflets linear; flowers globose; flower-bearing branchlets simple;" stem woody, six or seven feet high; leaves like those of wormwood, but whiter,

and more finely divided; flowers globular, in spikes; by some esteemed as a variety only of the last. June to August. The Levant. 1640. S.

** *Stem herbaceous, mostly simple; flowers in clusters.*

3. A. *Glacialis.* *Silky Wormwood.* "Leaves palmate, silky, many-cleft; stems ascending; flowers crowded, level topped;" leaves small, three-parted, linear; segments three-cleft, silky white, woolly; stems a span high, leafy, woolly; flowers globose, yellow, terminal, on short stalks. July, August. Switzerland. 1739. P.

4. A. *Tanacetifolium.* *Tansey-leaved Wormwood.* "Leaves twice pinnate, woolly beneath, shining; segments linear, lanceolate, acuminate, entire; cluster naked, terminal; flowers nodding;" stems numerous, a span high; root leaves sheathing; flowers pale yellow, in pairs, all toward the same side. July to August. Siberia. 1768. B.

*** *Herbaceous; stem somewhat branched; flowers in panicles; leaves compound.*

5. A. *Santonica.* *Tartarian Southernwood, or Worm Seed.* "Stem leaves twice pinnate, many cleft; branches undivided; spikes one ranked, reflexed; flowers with five florets;" stem panicled, rather hoary; branches wand-like; flowers round, nodding, solitary; leaves on the branches small, linear. September to November. Siberia. 1596. S,

6. A. Mari'tima. *Sea Southernwood.* "Leaves many parted, woolly; clusters drooping; receptacle naked; female florets three;" stem erect or decumbent, leafy, furrowed; lower leaves pinnate; wings three-cleft, the upper various, divided; the top leaves simple; flowers ovate, nodding: whole plant woolly, hoary. August. Britain. P.

7. A. Pon'tica. *Roman Wormwood.* "Leaves many parted, woolly beneath; stem leaves twice pinnate; leaflets linear; flowers roundish, nodding; receptacle naked;" stems from two to four feet high, upright, reddish, smooth, hoary, branched; flowers in clusters, hoary; the disk yellow. September. Hungary. 1570. P.

8. A. An'nua. *Annual Wormwood.* "Leaves three-fold pinnate, smooth on both sides; flowers somewhat globose, nodding; receptacle smooth, conical;" stem erect, smooth, streaked, from two to eight feet high in its own climate; flowers yellow, on axillary clusters; flower-stalks long, with lanceolate floral leaves: a plant with an agreeable scent. July. Siberia. 1741. A.

9. A. Absin'thium. *Common Wormwood.* "Leaves many cleft, silky, white; flowers hemispherical, pendulous; receptacle hairy;" stems rather erect, branched, angular, panicled at top; lower leaves twice wing-cleft, upper wing-cleft or digitate; clusters erect; flowers nodding, yellow. July to October. Britain. P.

. 10. A. Vulgaris. *Common Mug Wort.* "Leaves wing-cleft, flat, gashed, woolly beneath; clusters simple; flowers ovate; receptacle naked;" stems four feet high, erect, branched, panicled, furrowed, smooth, leafy, purplish; flowers erect, reddish, ovate, woolly; leaves dark green above; seldom seen in gardens unless with variegated leaves. August. Britain. P.

**** *Leaves simple.*

11. A. Integrifolia. *Entire-leaved Mug Wort.* "Leaves lanceolate, woolly beneath, entire, with one or two teeth; female florets five;" stems simple, two feet high; leaves narrow, cut into acute segments at their edges; flowers axillary, in small loose spikes, large, pale yellow. July, August. Siberia. 1759. P.

12. A. Dracunculus. *Tarragon.* "Leaves lanceolate, smooth, quite entire; stem stiff, smooth, branched, one or two feet high;" leaves stalked, green on both sides; flowers yellow, in a kind of spike, directed one way; perfect flowers twelve; female flowers six; receptacle flat, glutinous, naked. August. Siberia. 1548. P.

Many of the species of this genus are old inhabitants of our gardens; they possess similar medical properties, varying only in degree, all however are excluded from the modern *Pharmacopoeia* except Wormwood: they have been used time out of mind as anthelmintics or medicines for destroying worms, as the English name implies. Wormwood is so intensely bitter as to have become a

proverb: it sometimes supplies the place of hops; it is esteemed useful in stomach complaints, and infused in ale forms purl, which some of the labouring classes are in the habit of taking warm early in the morning. From the dried tops and leaves of Mug Wort a substance is prepared in Japan called Moxa, which is employed as an actual cautery in the gout and chronic rheumatisms, a cone of the Moxa is applied to the part affected and set on fire at the apex, gradually burning down to the skin, where it leaves a dark coloured spot which can be easily made to discharge. Tarragon is used in salads by the French, to correct the coldness of other herbs: the leaves infused in Vinegar make an excellent sauce for fish.

XL. CARPE'SIUM, Kapnion, Galen. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 2 Species.

1. *C. Cer'num. Drooping Carpesium.* "Flowers terminal, solitary, nodding; stem a foot and a half high, branched, leafy, cylindrical, woolly;" leaves alternate, oval, lanceolate, slightly serrate, clothed with short hairs; flowers yellowish; flower-stalk thicker at the top. July, August. Italy. 1739. P.

XLI. TANACE'TUM, probably a corruption of abarasia, it being a sort of everlasting flower. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 18 Species.

1. *T. An'num. Annual Tansy.* "Radical leaves doubly pinnate; stem leaves deeply wing-cleft, downy; segments sharp pointed; corymbs level topped; calyx

scales, oblong, hairy ;" stem two or three feet high, furrowed, branched, crowded with numerous small leaves of a hoary green ; flowers yellow, in terminal flat corymbs. July, August. Spain. 1629. A.

2. T. Vulga're. *Common Tansey.* "Leaves doubly wing-cleft, sharply serrate, naked ;" herb two feet high, leafy, dark green, with a strong scent and bitter taste ; leaves copious, sessile, a little hairy beneath ; flowers yellow, composing a large flattish corymbus ; it varies with curled and variegated leaves. July. Britain. P..

3. T. Balsamita. *Common Costmary.* "Leaves ovate, entire, serrate ;" lower ones stalked ; stems two or three feet high, with side branches, leaves on these sessile ; flowers in a terminal loose corymb, deep yellow : whole plant of a soft pleasant odour ; it has of late been erected into a new genus, with the name of *Balsamita Vulgaris*. August. Italy. 1668. P.

Common Tansey has been long cultivated in the garden as a culinary and medicinal herb : the leaves being used occasionally, while young and tender, in salads, during the Spring season, as well as for flavouring cakes, puddings, and other similar articles ; the dried leaves have also been employed as a remedy against worms. The last species was formerly pretty much used for the same purposes. *Costus* means an aromatic shrub, hence from its being put into ale, the old English name *Ale Coast* ; *Costmary* is the *Virgin Mary's Costus*.

XLI. **BAC'CHARIS**, a name in Dioscorides, from **Βακχος**, Bacchus. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 14 Species.

1. *B. Halimifo'lia*. *Sea Purslane-leaved Ploughman's Spikenard, or Groundsel Tea.* "Leaves obovate, notched in the upper part, crenate;" stem shrubby, six feet high; leaves many, like those of Goose-foot, evergreen, placed irregularly on the branches; flowers herbaceous, crowded, not handsome: a plant cultivated rather for its foliage than its flowers. October. Virginia. 1683. S.

XLIII. **CONY'ZA**, from **κόνιζω**, to fill with dust, some of the species being covered with a dusty pubescence. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 91 Species.

1. *C. Squarro'sa*. *Great Flea Bane.* "Leaves lanceolate, acute; stem herbaceous, corymbose; calyxes rugged;" stem two to three feet high, erect, angular, leafy, many flowered; leaves alternate, somewhat crenate, upper ones often entire; flowers yellowish. July, August. Britain. B.

2. *C. Bi'frons*. *Oval-leaved Flea Bane.* "Leaves ovate, oblong, embracing the stem, serrate, wrinkled;" stems several, erect; leaves rough; flowers yellow, in round terminal bunches. August. Canada. 1739. P.

3. *C. Can'dida*. *Woolly Flea Bane.* "Leaves ovate, stalked, entire, obtuse, woolly; peduncles one

flowered, solitary, terminal, axillary, thickening towards the top ;" stem six inches high, upright, round, whitish ; leaves very white, alternate ; flowers purple, stalked, crowded, of a pleasant smell ; more preserved for its silvery leaves than its flowers. June, July, Candia. 1714. Gr. Ho. S.

4. C. Fœ'tida. *Stinking Flea Bane.* " Leaves linear, tapering at the base, pointed, retuse ; flowers in dense corymbs ;" stems four feet high, with side branches ; leaves sessile, hairy, in clusters ; flowers numerous, golden yellow. August to November. Africa. 1722. P. Gr. Ho.

XLIV. GNAPHA'LIMUM, from γναφεις, a fuller, its leaves being soft like the nap of cloth. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 146 Species.

1. G. Sta'chas. *Common Shrubby Everlasting.* " Leaves linear ; corymbus compound ; branches wand-like ;" stem about three feet high : whole plant woolly ; flowers terminating in a compound corymb ; calyxes at first silvery, but turning to a yellow sulphur colour. June to October. Germany. 1629. S.

2. G. Ignes'cens. *Red-flowered Everlasting.* " Leaves rather lanceolate, woolly, sessile ; corymbs alternate ; flowers globular, in globular heads ;" stem woolly, a foot high, sending out a few side branches, terminated by a compound corymb ; flowers small, golden, changing to red as they fade. June to October. Native country not known. 1731. S.

3. G. Sangui'neum. *Egyptian Bloody Everlasting.*
 "Leaves decurrent, lanceolate, woolly, flat, with a naked point at the end;" under leaves spreading near the ground; stems six inches high, terminated by a large corymb of sessile flowers, of a fine red colour. May to July. Egypt. 1768. P.

4. G. Fœ'tidum. *Strong-scented Everlasting.*
 "Leaves stem-clasping, entire, acute, woolly beneath; stem branching;" lower leaves oblong, blunt; stem a foot and a half high; leaves alternate, when handled emitting a strong odour; flowers in a corymb, large, silvery. June to September. The Cape. 1692. B.

5. G. Margarita'ceum. *American Cud Weed, Pearly Everlasting.* "Leaves linear, lanceolate, acuminate, alternate; stem branched at top; corymbs level topped;" stems very downy, white; leaves numerous, long, sessile, growing without order round the stem, dark green above, downy beneath; flowers numerous, in crowded heads, silvery. July to September. England. P.

6. G. Plantagi'neum. *Plantain-leaved Everlasting.*
 "Runners procumbent; stalk very simple; root leaves ovate, very large;" stem leaves narrower, woolly, alternate; flowers in a terminating corymb, white, and small. June, July. Virginia. 1759. P.

7. G. Arena'rium. *Sand Everlasting.* "Leaves grey, woolly, lanceolate; radical leaves obtuse; corymb compound; stalks quite simple;" stem upright, a foot high, white with down; leaves alternate, the

edges rolled back; heads of flowers shining yellow; calyx scales lemon coloured. July to September. Europe. 1739. P.

3. G. Dioicum. *Dioecious Cudweed or Cat's Foot.*
Roots procumbent; stem simple; radical leaves spoon-shaped; corymb condensed; flowers dioecious; scales of the calyx obtuse, lengthened;" stems three to six inches high, clothed with many leaves, green above, downy beneath; outer scales of the calyx green, the inner scales white, tipped with purple. May to July. Britain. P.

We have no less than ten native species of Gnaphalium, most of which are esteemed weeds rather than flowers, as indeed are most of the European species; some greenhouse sorts from the Cape, are very showy and beautiful, and are much used for ornamental purposes.

XLV. XERANTHEMUM, from ξηρός, dry, and ἄνθος, a flower. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 3 Species.

1. X. Annuum. *Purple Xeranthemum, or Immortal Flower.* "Outer scales of the calyx obtuse, skinny, inner scales lanceolate, spreading; crown of the seed lanceolate, shorter than the calyx;" stem erect, branching; leaves linear, lanceolate, white, cottony; flowers numerous, an inch in diameter, varying from white to purple, single or double. Var. 1. X. Inapertum, leaves and flowers half as large. July, August. South of Europe. 1670. A.

XLVI. ANACY'CLUS, from *ανάκυλος*, to encircle.
 Nat. ord. *Linn. Compositæ. Juss. Corymbiferæ.*
 5 Species.

1. *A. Valenti'nus*. *Fine-leaved Anacyclus*. "Leaves doubly compound; leaflets divided, linear, roundish, acute; florets all tubular;" stem a foot and a half high, with side branches; flowers single, terminal, of a bright yellow, with a silvery calyx. This and the other species of *Anacyclus* are rarely cultivated, not having much beauty. June, July. Spain. 1658. A.

XLVII. PERDI'CIUM, from *περδίξιον*, a partridge, because those birds are fond of the plant. Nat. ord. *Linn. Compositæ. Juss. Corymbiferæ.* 12 Species.

1. *P. Anan'dria*. *Siberian Perdicium*. "Leaves stalked, ovate, toothed at the base, somewhat waved, downy beneath, the older leaves smooth;" calyx downy, closed, longer than the flowers; flower-stalk a foot high, cottony, with awl-shaped floral leaves; flowers nearly globose: a plant seldom seen, having nothing but botanical singularity to recommend it.

XLVIII. MA'DIA, if from *μαδός*, smooth, it seems a misnomer, as all the species are remarkably hairy. Nat. ord. *Linn. Compositæ. Juss. Corymbiferæ.* Species.

1. *M. Visco'sa*. *Clammy Madia*. "Leaves lanceolate, sessile, clammy; exterior calyx ten leaved;" flowers axillary, yellow, strong scented, on short stalks;

seeds black, shining; stem round, corymbose, branched, two feet high, covered with glandular hairs; leaves scattered, obtuse at the point. July, August. Chili. 1794. A.

XLIX. BEL'LIS, from *bellus*, pretty or handsome. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 3 Species.

1. B. Peren'nis. *Common Daisy.* "Flower-stalk naked, single flowered; leaves obovate, crenate, veiny;" radical ones hairy; flowers of the disk yellow, of the ray white or reddish: the garden varieties are the double white, red, red striped, variegated, scarlet and pied; double quilled with tubular florets; the cockscomb-shaped, double, white, red, and speckled; the proliferous or Childing Hen and Chicken Daisy. March to August. Britain. P.

2. B. An'nua. *Annual Daisy.* "Stem somewhat leafy, about three inches high;" leaves on the lower part, and supporting a single flower like that of the Common Daisy, but smaller. March to July. Spain. 1759. A.

L. CHRYSAN'THEMUM, from *χρυσος*, gold, and *θεμος*, a flower. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 27 Species.

* *Florets of the ray white.*

1. C. Leucan'themum. *Ox Eye Daisy.* "Leaves stem-clasping, lanceolate, serrate, gash toothed at the

base; stem erect, branching;" two feet high, furrowed, with red angles, somewhat hairy; flowers showy, large, terminal; florets of the disk yellow, of the ray white; leaves smooth, deep green. Two supposed varieties of this have been erected into distinct species, with the names of *C. Atratum* and *C. Montanum*. June, July. Britain. P.

2. *C. Achille'æ. Milfoil-leaved Chrysanthemum.*
"Leaves twice pinnate; wings oblong, serrate; flowers corymbose;" stem erect, a foot high, somewhat angular, many flowered; leaves like those of Milfoil, but eight times as large, sprinkled with dots; flowers white. June to August. Italy. 1773. P.

3. *C. Carina'tum. Three-coloured Chrysanthemum.*
"Leaves twice wing-cleft, fleshy, smooth; segments linear, distant, recurved; stem erect, branched; scales of the calyx keeled;" flowers large, beautiful; florets of the disk dark purple, of the ray white with a yellow base. There is a variety with perfectly yellow flowers. July to October. Barbary. 1796. A.

** *Florets of the ray coloured.*

4. *C. Myco'nis. Tongue-leaved Chrysanthemum.*
"Leaves tongue-shaped, obtuse, serrate; scales of the calyx equal;" stem erect, roundish; flower-stalk terminating, not thickened at the top; corolla deep yellow; ray short, three toothed, much resembling a common native species *C. Segetum*, which is a most troublesome weed in corn-fields. July. Italy. 1776. A.

3. C. *Coronarium*. *Garden Chrysanthemum*.

"Leaves twice wing-cleft, acute, broader near the summit; stem branched," two feet high, scorod, erect; branches forming loose tufts; leaves alternate, embracing the stem; flowers large, terminal, solitary; flowers single and double, white or yellow; in gardens the florets of the ray are barren. There is a variety with all the florets tubular, called Quill-leaved Chrysanthemum. July to September. Candia. 1629. A.

4. C. *Indicum*. *Indian Chrysanthemum*. "Leaves ovate, taper at the base, three lobed, toothed; stem branched; branches one flowered;" stem four feet high, upright, round; leaves resembling those of Mugwort, deep green above, lower surface soft; flowers large, solitary; florets of the disk yellow, of the ray whitish with a tinge of purple; flowers varying, single, semi-double and double, reddish, quite white, yellowish, flesh-coloured, purple, and of every intermediate colour, sometimes very large. September to November. China. 1764. P.

The last magnificent species is generally cultivated in China, and is becoming as great a favourite here, the flowers being very brilliant, and sometimes as large as the palm of the human hand. C. Coronarium has been long the inmate of almost every garden; some insignificant and ill defined species have been introduced, but are scarcely now to be found in England.

Li. PYRETHRUM, from πυρετός, a fiery heat, the root of some species being pungent, or else being

esteemed as a febrifuge. Nat. ord. Linn. Composite. Juss. Corymbiferæ. 25 Species.

1. P. *Corybo'sum*. *Mountain Feverfew*. "Leaves pinnate; leaflets lanceolate, wing-cleft, sharply serrate, the upper ones confluent; flower-stalks corymbose;" stems erect, two or three feet high; leaves like those of Tansey, but without smell or taste; flowers large, numerous, white, with a bright yellow disk. June to August. Germany. 1596. P.

2. P. *Parthe'niu'm*. *Common Feverfew*. "Leaves pinnate; leaflets oblong, obtuse, wing-cleft, cut; stem branched; flowers corymbose; rays twice the length of the calyx;" whole herb bitter and aromatic, hoary or downy; stem bushy; leaves stalked, flat, dilated; flowers numerous, about the size of a common Daisy; disk yellow; rays white; flowers sometimes double. June to September. Britain. P.

3. P. *Ro'seum*. *Rose-coloured Feverfew*. "Leaves smooth, pinnate; leaflets once or twice wing-cleft, serrate, acute, spreading; stem erect, single flowered;" stem twelve or eighteen inches high; florets of the disk yellow; rays crimson, varying to white. August, September. Mount Caucasus. 1804. P.

4. P. *Millefolia'tum*. *Milfoil-leaved Yellow Feverfew*. "Leaves doubly wing-cleft, linear, bluntnish; stem corymbose; rays half as long as the diameter of the disk;" stem leafy, branched, corymbose, bearing eight or more long stalked yellow flowers. May to September. Siberia. 1731. P.

This genus is made up of plants which formerly were differently arranged; the first, third, and fourth species were Chrysanthemums, the second a Matricaria; none of them are particularly attractive.

LII. DORONICUM, thought to be a corruption of an Arabic word, by others derived from *dōrōv*, a gift, and *victōriā*, victory; because it is destructive to wild beasts. Nat. ord. Linn. Compositæ. Juss. Corym. biferæ. 6 Species.

1. D. Pardalian'ches. *Great Leopard's Bane.* "Leaves with small teeth, the upper round, heart-shaped; root leaves stalked, stem leaves embracing;" roots thick, fleshy, knotty; stems about three feet high, channelled, hairy; branches terminated by a yellow flower. May. Britain. P.

2. D. Plantagineum. *Plantain-leaved Leopard's Bane.* "Leaves ovate, acute, somewhat toothed; branches alternate;" leaves indented towards the base, the upper part entire; stems two feet high, each terminated by a yellow flower; these are amongst the very few syngenesious plants which blossom in the spring. May. Germany. 1570. P.

LIII. AR'NICA, from *απρυμας*, to sneeze; it being used as a sternutatory. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 24 Species.

1. A. Montana. *Mountain Arnica.* "Leaves ovate, entire, stem leaves twin, opposite;" stem

scarcely a foot high, obscurely angular; flowers deep yellow, on long terminal flower-stalks. July, August. Europe. 1731. P.

2. A. Scorpioides. *Alternate-leaved Arnica.*
"Leaves toothed; teeth pointed; root leaves elliptic, stalked; stem leaves alternate, oblong;" stems several, terminated by a deep yellow flower; whole plant of a disagreeable smell. Switzerland. July, August. 1710. P.

3. A. Bellidias'trum. *Daisy-leaved Arnica.*
"Flower-stalk naked, single flowered; leaves stalked, obovate, spreading;" leaves and flowers very much like those of the common Daisy, but the latter are upon stalks, nearly a foot long. June to August. Germany. 1570. P.

An infusion of the flowers and root of the first species has been extravagantly extolled in Germany as efficacious in dropsies, intermittent fevers, and paralytic disorders; it occasions much nausea in the stomach, and certainly possesses some very active properties.

LIV. IN'ULA, contracted from *in'ula*; which plant was said to have sprung from the tears of Helen. Nat. ord. Lian. Compositæ. Juss. Corymbiferæ.
38 Species.

1. I. Hele'nium. *Common Inula, or Elecampane.*
"Leaves stem-clasping, ovate, wrinkled, woolly beneath; scales of the calyx ovate;" stems about four feet high, leafy, downy, branched; flowers

large, terminal, golden yellow. July, August. Britain. P.

2. I. *Oculus Christi*. *Hoary Inula*. "Leaves stem-clasping, oblong, entire, hairy; stem hairy, corymbed;" stem a foot and a half high, upright, hard, stiff; flowers corymbose, of a fine yellow, not quite so large as the preceding. July to September. Austria. 1759. P.

3. I. *Britannica*. *Creeping-rooted Inula*. "Leaves stem clasping, lanceolate, serrate at the base, woolly beneath; stem corymbed, woolly; branches lateral, longer than the apex;" stem near two feet high, dividing into two or three peduncles, each sustaining one largish flower, of a deep yellow. July to September. Germany. 1759. P.

4. I. *Squarro'sa*. *Net-leaved Inula*. "Leaves oval, rigid, sessile, a little serrate, rough, netted, veined; scales of the calyx ovate, reflexed;" stem downy, scored, often one flowered; peduncles terminating, one or two flowered; calyxes smooth, hard, rugged; flowers rather large, pale yellow. July to September. 1768. P.

5. I. *Salicina*. *Willow-leaved Inula*. "Leaves lanceolate, oblong, indistinctly serrate; serratures glandular; stem hirsute, one flowered; scales of the calyx lanceolate, woolly;" root aromatic; stem from two to three feet high, firm, tinged with red; leaves alternate, sessile, smooth, shining; flowers an inch in

diameter, yellow, terminating in a small corymb; August, September. 1648. P.

6. I. *Hir'ta*. *Hairy Inula*. "Leaves sessile, lanceolate, indistinctly serrate, rigid, hairy; stem somewhat divided, woolly, one flowered; scales of the calyx lanceolate;" leaves broader, blunter, than in the last species; stem round, not grooved; flowers two or three, each on a separate peduncle, largish, of a pale yellow. June to September. Siberia. 1759. P.

7. I. *Suave'olens*. *Woolly-leaved Inula*. "Leaves elliptic, tapering at the base, hairy, on short stalks; lower leaves toothed; stem many flowered," upright, purplish, woolly, leafy; flowers sweet smelling, yellow. June to August. South of Europe. 1758. P.

8. I. *Crithmifo'lia*. *Samphire-leaved Inula*. "Leaves linear, fleshy, generally three pointed; calyx smooth;" leaves alternate, smooth, and succulent, salt to the taste; flowers solitary, large, handsome; disk orange-coloured; rays yellow. August, September. England. P.

Inula is a very extensive genus, nearly allied to Aster, containing plants not remarkable for their beauty; several species, besides the above detailed, have occasionally been introduced, but they are rarely cultivated. Elecampane has been long in repute, for its root, which is large and fleshy, abounding with mucilage of an aromatic and somewhat bitter flavour; when candied, it is esteemed a useful pectoral. The name is evidently derived from the

Spanish *Inula Campana*, or Field Inula. We have a very common native species, *I. Dysenterica*, said to be useful in the cure of dysenteries.

Lv. ERI'GERON, from ἦρης, the spring, and ἄρων, an old man; because hoary in the spring. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 32 Species.

1. *E. Grave'olens*. *Strong smelling Erigeron*. "Leaves commonly linear, quite entire; branches lateral, many flowered;" stems upright, purplish, hairy, viscid, two to three feet high; branches spreading at bottom, crowded, all flowering; leaves with small viscid hairs, strong smelling, of a dusky russet colour; corolla yellow, small, with a ray of five or six florets, purplish beneath. July, August. South of Europe. 1633. A.

2. *E. Canaden'se*. *Canadian Erigeron*. "Flowers in panicles, hairy, rough; leaves lanceolate, fringed;" stem three feet high, firm, hairy, much branched towards the top; flowering heads numerous; florets small, yellow in the centre, white in the ray, with a tinge of red. August. Britain. A.

3. *E. A'cre*. *Blue Erigeron*. "Flower-stalks alternate, one flowered;" stems somewhat angular, hairy, often purple, a foot or more high; leaves lanceolate, linear, hairy on both sides; florets of the disk yellow, of the ray purple; flowers seldom expanding. *E. Alpinum* is perhaps a variety, with

more numerous florets in the ray. July, August, Britain. B.

4. E. Purpureum. *Purple Erigeron.* " Stem many flowered, hairy; leaves oblong, somewhat toothed; stem-clasping; florets of the ray hair-like, numerous, purple, longer than the disk," which is yellow; flowers in panicles; calyx a little hairy; stem from one to two feet high. July, August. Hudson's Bay. 1776. P.

The above species of *Erigeron* are occasionally admitted into botanic gardens; the remainder, like so many other plants of this class, though introduced as novelties, yet having little beauty, they have been for the most part suffered quietly to become extinct.

LVI. SOLIDA'GO, *a solidando vulnera*, from its efficacy in healing wounds. Nat. ord. Linn. Composite. Juss. Corymbiferae. 40 Species.

* Clusters of flowers leaning one way; leaves three-nerved.

1. S. Canaden'sis. *Canadian Golden Rod.* " Stem downy; leaves lanceolate, serrate, triply ribbed, rough; clusters copious, panicled, leaning one way, recurved; florets of the ray hardly longer than the disk;" stems from two to five feet high, angular, terminated by an ample downy panicle of innumerable small yellow flowers; leaves varying from smooth to

hairy, or rugged. July to September. North America. 1648. P.

2. S. Lateriflora. *Lateral-flowered Golden Rod.*
" Stem erect, rather hairy; leaves lanceolate, ab-
solutely three ribbed, smooth, rough-edged, the lower
ones slightly serrate; clusters panicled, leaning one
way, somewhat recurved;" stem from two to three
feet high, scored, purplish, sometimes green, furnish-
ed with numerous lateral flowering branches, as well
as a principal terminal one; flowers bright yellow.
August, September. North America. 1758. P.

** *Clusters of flowers leaning one way, leaved, veined.*

3. S. Altissima. *Tall Variable Golden Rod,*
" Stem erect, hairy; leaves lanceolate, the lower
ones deeply serrate, very rough, wrinkled; panicles
leaning one way;" stems numerous, three to five feet
high, clothed with leaves; flowers very many, in
long rod-like spikes, somewhat reflexed, yellow,
twice the size of those of S. Canadensis. This is a
very variable species, scarcely two individuals look-
ing alike. August, September. North America.
1686. P.

4. S. Semperi'tens. *Narrow-leaved Evergreen
Golden Rod.* " Stem erect, smooth; leaves linear,
lanceolate, rather fleshy, smooth, entire, rough-
edged; clusters panicled, leaning one way; flower-
stalks roughish;" stem red, six feet high; leaves op-

pious, long, narrow; panicles dense; flowers yellow.
September, October. North America. 1699. P.

5. S. Odóra. *Sweet scented Golden Rod.* "Stem erect, downy, scored; leaves linear, lanceolate, entire, smooth, rough-edged; clusters panicled, leaning one way, nearly simple," two or three inches long, spreading horizontally, each accompanied by a leaf; flowers yellow, when dried affording an agreeable substitute for tea. July, August. North America. 1699. P.

*** *Clusters erect.*

6. S. Bi'color. *Two coloured Golden Rod.* "Stem hairy; leaves elliptic, hairy, lower ones serrated, those on the flower branches entire, numerous and small; clusters erect," short, close, rays white; stems a foot and a half high, garnished with leaves; branches erect, almost from the bottom of the stem. August, September. North America. 1759. P.

7. S. Lanceola'ta. *Narrow-leaved Golden Rod.* "Stem smoothish, furrowed, much branched; leaves almost linear, entire, roughish, nearly erect, with three or five rough ribs; corymba terminal, level-topped; flowers in heads; rays not longer than the disk;" stems four or five feet high, branched in a corymbose manner, leafy, angular, or furrowed; leaves sessile, grass green; flowers numerous, small, in a dense corymbus, yellow. October. North America. 1758. P.

8. S. *Cœsia*. *Maryland Golden Rod*. "Stem nearly erect, very smooth and even; leaves lanceolate, smooth, with roughish edges and ribs; clusters erect; rays rather longer than the disk;" stem upright, grey, zig-zag, branched, leafy; leaves two inches long, pointed; clusters numerous, short, with rough stalks; flowers yellow. September, October. North America. 1732. P.

9. S. *Mexica'na*. *Mexican Golden Rod*. "Stem oblique, smooth; leaves lanceolate, somewhat fleshy, entire, smooth in every part; clusters panicled, erect; flower-stalks scaly, smooth; rays longer than the calyx;" a tall plant; flowers large, yellow; radical leaves large, on long stalks. July to October. North America. 1683. P.

10. S. *Vimi'nea*. *Twiggy Golden Rod*. "Stem erect, slightly downy; leaves linear, lanceolate, smooth, rough-edged, tapering at the base, the lower ones somewhat serrate; clusters erect; rays elongated;" leaves thin and membranous, not succulent; flower-stalks and branches angular and rough; flowers numerous, rather large, yellow. September. North America. 1759. P.

11. S. *Flexicau'lis*. *Crook-stalked Golden Rod*. "Stem zigzag, roundish, smooth; leaves lanceolate, pointed, serrate, smooth, nearly sessile; clusters axillary, erect;" stem purplish, even; leaves numerous; clusters of flowers short, pale yellow. September. North America. 1725. P.

12. *S. Virga Antea.* *Common Golden Rod.* "Stem somewhat zigzag, angular, hairy; leaves more or less serrate, roughish, tapering at the base; clusters panicled, erect, close; rays twice the length of the calyx;" stem from one to three feet high, branched in a panicled manner; leaves ovate; panicle terminal, many flowered, leafy; florets of the ray five to ten, of a golden yellow. A plant subject to many varieties: 1. With larger flowers, more downy; clusters numerous, axillary. 2. With larger flowers, but fewer leaves; coarsely serrate. 3. *S. Cambrica,* panicle simple, of humbler growth. 4. *S. Minuta,* a span high, with flowers large. July to September. Britain. P.

13. *S. Rigida.* *Hard-leaved Golden Rod.* "Leaves ovate, oblong, rough, like the corymbose stem, with minute rigid hairs, the lowermost serrate, upper entire; clusters compact; rays twice the length of the obtuse calyx;" stem four or five feet high, round, scored, leafy, rough with rigid hairs; leaves rough, like a file, radical ones stalked, a foot long; flowers rather large, yellow. September. North America. 1710. P.

These are the chief species of *Solidago* that are cultivated for ornament; some others may be found that are occasionally cultivated for curiosity. All the species are difficult to determine; they enliven the garden at the close of autumn, mingling their golden panicles of flowers, very happily with the purple corymbs of the *Asters*. Our English species, *Virga Auræa*, is in some repute as a re-

medy in calculous cases ; as a remarkable example of the estimation of things far fetched, Old Gerarde says, that "in my remembrance, the dry herbe which came from beyond the sea sold in Bucklersbury for halfe a crowne an ounce, but since it was found in Hampstead Wood no man will give halfe a crowne for an hundred weight of it."

LVII. CINERA'RIA, from the cinereous or ash-coloured appearance of many of the species. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 55 Species.

1. C. Sibi'rica. *Siberian Cineraria.* " Raceme simple ; leaves heart-shaped, obtuse, finely toothed, with an even surface ; stem simple, one leafed ;" two or three feet high ; leaves with a short point ; flowers yellow ; floral leaves two at the base of the calyx, shrivelling. June to August. Siberia. 1784. P.

2. C. Cordifo'lia. *Heart-leaved Cineraria.* " Panicles few flowered ; stem simple ; all the leaves stalked, heart-shaped, doubly toothed ; leaf-stalks somewhat toothed at the base ;" stem a foot high, leafy, a little branched ; flowers yellow ; flower-stalks branched, woolly, with small scales ; calyx short. July, August. Austria. 1739. P.

3. C. Mari'tima. *Sea Cineraria, or Rag Wort.* " Flowers panicled ; calyxes woolly ; leaves wing cleft ; segments obtuse, somewhat three lobed, woolly ; stems shrubby," several, two or three feet high, cylindric, leafy, branched ; leaves soft ; flowers yellow, in terminal panicles ; florets of the ray revolute ; the

whole plant cottony, white. July to September. South of Europe. 1633. S.

4. C. Ameloi'des. *Blue flowered Cineraria, or Cape Aster.* "Flower-stalks single flowered; leaves opposite, egg-shaped, naked; stem somewhat shrubby," two feet high, purplish, rough, branched at the bottom; leaves thick, succulent, sessile; flowers with a yellow disk and sky blue ray. February to September. S. Gr. Ho.

5. C. Lana'ta. *Woolly Cineraria.* "Flower-stalks single flowered; leaves roundish, heart-shaped, with seven angles, downy beneath;" stems a foot high, a little branched, cottony near the top; florets of the ray of a vivid purple without, whitish within; of the disk dark purple. May to September. Canary Islands. 1780. S. Gr. Ho.

Many of the species of Cineraria are well known in our green-houses; they are chiefly inhabitants of the Cape and the African Isles; the last is exceeded in beauty by none, and it is easily propagated. We have two native species not admitted into gardens.

LVIII. SENE'CIO, from *senex*, an old man; its grey down resembling the silvery head of age. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 122 Species.

* *Flowers without rays; florets tubular.*

1. S. Hieracifo'lium. *Hawkweed Groundsel.* "Corollas naked; leaves oblong, stem-clasping, une-

qually and deeply cut; stem herbaceous, erect," three feet high; flowers in a sort of terminating umbel, without rays; florets tubular, dirty white. August. North America. 1699. A.

2. S. Pseu'do Chi'na. *Chinese Groundsel.* "Corollas naked; leaves wing cleft, lyrate, toothed; flower-stalk nearly naked, very long;" stem none; leaves radical, large, smooth; peduncles slender, sustaining a few yellow flowers. June to August. East Indies. 1732. P. Gr. Ho.

** *Flowers radiate; leaves wing cleft.*

3. S. E'legans. *Elegant Groundsel, or Purple Jacobaea.* "Florets of the ray spreading; leaves hairy, viscid, wing cleft, much spreading; common stalk narrowed below; calyx hairy;" stem about eighteen inches high, erect, branched, furrowed; leaves at the stem joints bright green; flowers of the disk yellow, of the ray brilliant purple, sometimes double, occasionally white. June to August. The Cape. 1700. A.

4. S. Inca'nus. *Downy Groundsel.* "Flowers radiate; leaves snowy white, woolly on both sides, wing cleft; segments linear, obtuse, toothed; corymb condensed;" stems a foot high, woolly; flowers of a golden yellow. July, August. The Alps. 1759. P.

5. S. Abrotanifo'lius. *Southernwood-leaved Groundsel.* "Flowers radiate; leaves wing cleft, jagged;

leaflets linear, naked, acute; stalks mostly two flowered;" stem from one to two feet high, leafy; leaves dark green above, glaucous below; flowers large, handsome, lemon-coloured, in terminal clusters. July to October. Alps of Austria. 1640. P.

*** *Flowers radiate; leaves undivided.*

6. *S. Paludo'sus.* *Great Fen Ragwort, Bird's Tongue.* "Flowers radiate; leaves sword-shaped, sharply serrate, somewhat woolly beneath; stem perfectly straight," from three to six feet high, simple, leafy, round, hollow, clothed with a loose down; leaves sessile, scattered; flowers in a sort of terminal corymb, large, bright yellow. June to August. England. P.

7. *S. Nemoren'sis.* *Branching Groundsel.* "Florets of the ray nearly revolute; leaves ovate, lanceolate, serrate, fringed at the margin, slightly downy beneath, sessile, unequal at the base;" stems single, two or three feet high, erect, slightly angular, purplish; flowers very numerous, yellow, in terminal compound corymbs. July, August. Austria. 1785. P.

8. *S. Sarace'nicus.* *Creeping rooted Groundsel.* "Florets of the ray spreading; flowers corymbose; leaves lanceolate, serrate, smooth;" stems erect, three to five feet high, angular, leafy; leaves alternate, sessile; flowers bright yellow, in a large terminal corymb. July to October. Britain. P.

9. *S. Doria.* *Broad-leaved Groundsel.* "Florets

of the ray spreading; outer scales of the calyx spreading; leaves somewhat decurrent, oblong, lanceolate, glaucous, serrate;" stem from two to five feet high, much branched, scored; leaves alternate; flowers rather small, numerous, palish yellow, in terminal compound corymbs. July to September. Austria. 1570. P.

10. S. Doro'nicum. *Alpine Groundsel.* "Florets of the ray spreading; stem simple, mostly single flowered; leaves undivided, serrate, radical ones ovate, hairy beneath;" stem simple, hairy; root leaves stalked, thickish; stem leaves small, lanceolate; flowers large, terminal, solitary, of a deep yellow, on longish thick stalks. July to September. South of Europe. 1705. P.

Many of the species of this most numerous genus are to be considered as weeds, whose admission into a garden is by no means to be desired. The common Groundsel, *Senecio Vulgaris*, whose young tops are a favourite food with Canary birds, may serve as an example; several other species are natives of the Cape, and require the protection of the Green-House. Few, if any, besides the above detailed, are to be found in modern cultivation.

LIX. TUSSILA'GO, from *tussis*, a cough, and *ago*, to act upon; it being a remedy for that disorder. Nat. ord. *Linn.* Compositæ. *Juss.* Corymbiferæ. 21 Species.

1. T. Alpi'na. *Alpine Coll's-foot.* "Stalks single flowered, with oblong scattered floral leaves;

flower without rays; leaves kidney-shaped, toothed, smooth on both sides," few of the radical ones stalked; flower erect, half an inch broad; calyx purple, smooth; florets white or purplish. March to May. Switzerland, 1710. P.

2. *T. Far'fara.* *Common Colt's-foot.* "Stalk single flowered, scaly; flower radiated; leaves heart-shaped, angular, toothed, downy beneath;" flower drooping before it expands, then erect, yellow; florets of the ray numerous. March, April. Britain. P.

3. *T. Al'ba.* *White Colt's-foot, or Double toothed Butter-bur.* "Panicle dense, level-topped; flowers without rays; leaves roundish, heart-shaped; doubly and sharply toothed, white and shaggy beneath;" flowers rather small, snow-white, without rays. January to April. Europe. 1683. P.

4. *T. Ni'vea.* *Snowy Colt's-foot.* "Panicle dense, rather oblong; flowers without rays; leaves triangular, heart-shaped, simply toothed, with spreading angular lobes, densely downy, and white beneath;" flowers pale flesh-coloured; seed down near an inch long. The female plant, termed *T. Paradoxa* by some botanists, as a distinct species, has many female but only three perfect florets in each calyx, and of these the anthers are unconnected. April, Switzerland. 1713. P.

5. *T. Petasi'tes.* *Common Butter-bur.* "Panicle dense, ovate, oblong; flowers without rays; leaves roundish; heart-shaped, unequally toothed, slightly

angular, with round converging lobes, paler and somewhat shaggy beneath;" flowers pale, dusky, flesh-coloured; leaves very large. *T. Hybrida* seems to be the female plant; most of the florets bearing a style only; its leaves are rather smaller, panicle somewhat larger. March, April. Britain. P.

6. *T. Palma'ta*. *Cut-leaved Colt's-foot*. "Flowers corymbose, level topped, radiate; leaves seven-lobed, palmate, cut, downy beneath;" flowers light flesh-coloured or purple, with short obtuse rays. April. Newfoundland, 1777. P.

The leaves of *T. Farfara*, the Common *Colt's-foot*, are mucilaginous, slightly bitter and astringent, and are recommended either in infusion, or smoked like tobacco, as a cure for coughs; the latter mode is prescribed by Dioscorides, and it is remarked as the only instance tending towards the practice of smoking amongst the ancients. *T. Nivea* and *T. Petasites* may be considered as dioecious plants, rarely producing fertile seeds; the office of reproduction being left to their female counterparts, *T. Paradoxa* and *T. Hybrida*, heretofore reckoned distinct species.

LX. *AS'TER*, from *αστηρ*, a star; the flower being radiate. Nat. ord. *Linn. Compositæ. Juss. Corymbiferæ*. 103 Species.

* Leaves rounded at top.

1. *A. Alpi'nus*. *Alpine or Great Blue Star Wort*. "Leaves somewhat spoon-shaped, rough with hairs,

entire; stems simple, one flowered;" stem a foot high; stem leaves two or three; flowers large, blue. May to August. The Alps. 1658. P.

*** Leaves linear.*

2. A. A'cris. *Acrid Star Wort.* "Leaves lanceolate, linear, stiff, entire, flat; flowers in corymbs, level topped; flower-stalks leafy;" stems much branched; leaves very narrow; flowers in large clusters, of a pale blue. August, September. South of Europe. 1731. P.

3. A. Linifo'lius. *Flax-leaved Star Wort.* "Leaves linear, entire, roughish; branches corymbed, level topped, leafy; calyx tiled; florets of the ray equal to those of the disk;" leaves lanceolate, narrowing to the end; flower-stalks with many awl-shaped scales; stems strong, two or three feet high; branches terminated by one blue flower. August. North America. 1739. P.

4. A. Linariifo'lius. *Savory-leaved Star Wort.* "Leaves linear, entire, pointed, scabrous, stiff, upper ones lax, remote; calyxes tiled; branches level topped;" stems purplish; leaves rough, sharp, keeled, serrate; flower-stalks alternate; flowers few, terminal, solitary, rather large, violet purple. September, October. North America. 1699. P.

5. A. Tenuifo'lius. *Fine-leaved Star Wort.* "Leaves somewhat linear, quite entire; flower-stalks leafy; stems five feet high, slender, angular, smooth, with

few branches;" leaves alternate, roughish; flowers terminal, small, solitary, blueish white. September, October. North America. 1725. P.

6. A. Dumosus. *Bushy Star Wort.* "Leaves linear, entire, smooth, those on the small branches very short; branches panicled; calyxes cylindrical, closely tiled;" stem two feet high, much branched; flowers small, very white, sometimes pale violet; disk yellow. September, October. North America. 1724. P.

7. A. Ericoides. *Heath-leaved Star Wort.* "Leaves linear, entire, smooth, those of the small branches awl-shaped; calyx closed, rugged; leaflets acute; stem smooth," slender, three feet high; branches numerous, bushy, terminated by a single flower. September. North America. 1758. P.

8. A. Concolor. *Self-coloured Star Wort.* "Leaves ovate, sessile, quite entire; stem simple; raceme terminal;" stem four feet high; whole plant woolly; cluster simple, with short flower-stalks; flowers pale blue. August to November. North America. 1759. P.

9. A. Umbellatus. *Umbelled Star Wort.* "Leaves lanceolate, tapering at the base, entire, rough edged, branches corymb, level topped;" stems stiff, channelled, several feet high; leaves alternate; ray of the flower white. July to September. Nova Scotia. 1759. P.

10. A. Salicifolius. *Willow-leaved Star Wort.* "Leaves linear, lanceolate, quite entire, smooth;

calyx tiled, lax; stem glossy," five or six feet high; leaflets of the calyx acute, expanding at the end; ray blueish, flesh colour. September, October. North America. 1760. P.

11. A. Amel'ius. *Italian Star Wort, or Virgil's Amellus.* "Leaves oblong, lanceolate, entire, rough; branches corymbed; calyxes tiled, somewhat rough; leaflets obtuse; the inner membranous coloured at the end;" stems numerous, branching at top into eight or ten flower-stalks, each terminated by a single large flower; rays blue; disk yellow. August, September. South of Europe. 1596. P.

12. A. Ri'gidus. *Stiff-leaved Star Wort.* "Leaves linear, alternate; flowers terminal, solitary;" leaves small, stiff, many; stem woody, almost simple; flower rather handsome; florets of the ray purple, long; of the disk grey. August to October. Virginia. 1759. P.

13. A. No'vee An'gliae. *New England Star Wort.* "Leaves lanceolate, entire, stem-clasping, hairy; calyxes longer than the disk, loose; leaflets linear, lanceolate, nearly equal; stem hispid;" stems many, five feet high, brown, terminated by large violet-coloured flowers, in a loose panicle. September, October. North America. 1710. P.

14. A. Grandiflo'rus. *Catesby's Star Wort.* "Leaves stem-clasping, linear, entire, hispid, fringed, those of the branches and calyx reflected;" stems many, three or four feet high, stiff, reddish, hairy;

leaves of the branches small, rough; branches each terminated by one large blue flower. October, November. North America. 1720. P.

*** *Leaves heart-shaped, ovate, or serrate.*

15. A. Undula'tus. *Waved Star Wort.* "Leaves serrate, hairy, waved, lower cordate; leaf-stalks winged, dilated at the base; branches wand-like; calyxes tilted; stem hairy," two or three feet high; flowers in loose spikes, of a pale blue, inclining to white. August to October. North America. 1699. P.

16. A. Panicula'tus. *Panicled Star Wort.* "Lower leaves ovate, lanceolate, somewhat stem-clasping; upper leaves lanceolate, small; stem panicled; branches one flowered; peduncles leafy;" stems about four feet high; flowers large, blue. September, October. North America. 1640. P.

17. A. Cordifo'lius. *Heart-leaved Star Wort.* "Leaves heart-shaped, acute, finely serrate, hairy underneath; leaf-stalks almost simple; branches panicled; stem rough with hairs," much branched at top; calyxes tilted, close; ray blueish white, with twelve florets. July to September. North America. 1759. P.

18. A. Macrophy'lus. *Large-leaved Star Wort.* "Leaves oblong, serrate, the upper ovate, sessile, those on the stem heart-shaped, with leaf-stalks, somewhat winged;" flower-stalks crowded at the top, often three cleft; flowers blue or white. July to September. North America. 1739. P.

19. A. *Chinensis*. *Chinese Star Wort, China Aster.* "Leaves ovate, angular, toothed, stalked; calyxes expanding, leafy, terminal;" stem from eighteen inches to two feet high; branches long, bending, one flowered; bottom leaves like those of Goose-foot; leaves of the branches smaller, upper ones narrow, and entire; flowers large, handsome, often double; disk yellow; ray white, blue, purple, red, variegated with white and blue. July, August. China. 1731. A.

**** *Leaves lanceolate, the lower serrate.*

20. A. *Tripolium*. *Sea Star Wort.* "Leaves linear, lanceolate, entire, fleshy, smooth, three nerved; leaflets of the calyx membranous, obtuse;" stems much varying in height, smooth, glaucous; flowers numerous, handsome, yellow in the disk, blue in the ray, in the morning they appear blue, afterwards the florets of the ray fall off, and the flowers appear yellow, and these soon following are succeeded by the white down, hence the flower undergoes a triple change in the course of the day, whence its specific name. August, September. Britain. P.

21. A. *Punicus*. *Red-stalked Star Wort.* "Leaves stem-clasping, lanceolate, serrate, somewhat rough; branches panicled; calyxes lax, longer than the disk, its leaflets linear, lanceolate, nearly equal; stem hairy," dark purple or reddish green, varying from three to eight feet high; flowers on single stalks,

forming a corymb at top. July to October.
North America. 1710. P.

22. A. *Divaricatus*. *Straddling-branched Star Wort*. "Branches straddling; leaves ovate, serrate; floral leaves quite entire, rather obtuse, stem-clasping;" stems rough, about two feet high, dividing towards the top into many forked branches; flowers almost in an umbel, whitish. September, October.
North America. 1699. P.

23. A. *Lævis*. *Smooth Star Wort*. "Leaves stem-clasping, entire, shining; root leaves somewhat serrate; branches simple, commonly one flowered; calyxes tiled; flower-stalks leafy, subdivided; leaflets somewhat wedge-shaped, thickened at the end; stem smooth;" florets of the ray blue. September, October.
North America. 1758. P.

24. A. *Mutabilis*. *Changeable Star Wort*. "Leaves almost stem-clasping, lanceolate, serrate, glossy, drawn to a point below; branches wand-like; calyxes rather leafy, lax; stem smooth;" florets of the ray purple, of the disk first yellow, then turning to purple; leaves of the flower-stalks and calyxes rugged and recurved. September, October.
North America. 1710. P.

25. A. *Tradescanti*. *Tradescant's Star Wort, Michaelmas Daisy*. "Leaves lanceolate, serrate, sessile, smooth; middle branches wand-like; calyxes closely tiled; stem round, smooth," brownish; radical leaves like those of Willow; florets of the ray

about twenty, varying from white to purple; flowers numerous; a dwarf variety has white flowers. July to September. North America. 1633. P.

26. A. No'vi Bel'gii. *New Holland Star Wort.* "Leaves almost stem-clasping, lanceolate, smooth, rough at the edge, the lower serrate; branches subdivided; calyxes loosely tiled; leaflets linear, lanceolate; stem round, smooth," four feet high, having broad leaves at the bottom, of smaller size towards the top; floret of the disk yellow, of the ray pale blue, revolute: whole plant much resembling A. Mutabilis. September, October. North America. 1710. P.

27. A. Mi'ser. *Small White-flowered Star Wort.* "Leaves sessile, lanceolate, somewhat serrate, smooth; calyxes tiled; leaflets acute; disk equal to the rays;" stem a foot and a half high, less panicled than in most of the species; leaves very small; flowers on short stalks on every side of the branches; florets of the ray white, small; of the disk dark yellow; disk convex. September to November. North America. 1759. P.

28. A. Diffu'sus. *Diffuse Star Wort.* "Leaves elliptic, lanceolate, serrate, smooth, well proportioned; branches spreading; calyxes tiled; stem downy;" florets of the disk red, of the ray white: a variety has the branches more wand-like; florets of the disk straw-coloured. September. North America. 1777. P.

29. A. Pen'dulus. *Pendulous Star Wort.* "Leaves

elliptic, lanceolate, serrate, smooth, those of the smaller branches rather remote; branches very straddling, pendulous; stem downy;" florets of the ray white, of the disk yellow, changing to brownish. September, October. North America. 1758. P.

30. A. Jun'ceus. *Slender-stalked Star Wort.* "Leaves lanceolate, linear, sessile, smooth, the lowest somewhat serrate, those of the smaller branches lanceolate; branches wand-like; calyxes tiled; stem smoothish," four feet high; leaflets of the calyx acute, spreading; ray flesh-coloured; disk pale yellow, elevated. September, October. North America. 1758. P.

Of this immense genus the species thus detailed have been the longest introduced into England, and are those which are the most frequently met with: some other fresh American species may however occasionally be seen, they are all difficult to discriminate; many of them are apt to be confounded under the general name of Michaelmas Daisy. Most of the species are autumnal, and continuing a long time in flower, they enliven the border when most other plants have withdrawn from the rude approaches of winter.

LXI. BEL'LIUM, from *Bellus*, pretty. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 2 Species.

1. B. Bellidioïdes. *Small Bellium.* "Flower-stalks naked, thread-form," one flowered; leaves radical, obovate, quite entire, almost upright; runners thread-form, bearing both leaves and flowers; florets

of the ray white, of the disk yellow: the plant differs from the common Daisy in having a crown to the seed. June to September. Italy. 1798. A.

2. B. Minutum. *Dwarf Bellium, Bastard Daisy.* " Stem leafy, thread-form," an inch long; leaves obovate, entire; flower-stalks one or two, hair-like, one flowered; calyx the size of a Cabbage seed: one of the minutest of plants. June to October. The Levant. 1772. A.

LXII. DAHLIA, in honour of Andrew Dahl, a Swedish botanist. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 2 Species.

1. D. Superflua. *Fertile-rayed Dahlia.* " Florets of the ray strap-shaped, female; leaves unequally pinnate; leaflets two or three pair;" stem from three to six feet and upwards; flowers large, handsome; florets of the disk yellow, of the ray commonly red or purple, but varying to almost every shade of colour except blue. July to November. Mexico. 1789. P.

2. D. Frusta'nea. *Barren-rayed Dahlia.* " Florets of the ray neuter;" leaves unequally pinnate, rough; leaflets ovate, acuminate, serrate;" florets of the disk yellow, of the ray scarlet, orange, or yellow. September, October. Mexico. 1802. P.

These showy autumnal plants, though of comparatively recent introduction, are now generally cultivated throughout the whole kingdom.

LXIII. *TAGE'TES*, from *Tages*, the grandson of Jupiter, who first taught the Etruscans the art of divination. Nat. ord. Linn. Composite. Juss. Corymbiferæ. 8 Species.

1. *T. Pa'tula*. *French Marygold*. "Stem spreading; leaves pinnate; leaflets lanceolate, with hair-pointed serratures; stalks single flowered, somewhat swelling upwards;" stem a foot and a half high, widely spreading; leaves opposite; flowers two inches in diameter, yellow, with broad lateral stripes, or spots to each floret of a rich brown; flowers often double. July to October. Mexico. 1573. A.

2. *T. Erec'ta*. *African Marygold*. "Stem erect; leaves pinnate; leaflets lanceolate, with hair-pointed serratures; stalks single flowered, swelling upwards;" leaves paler than in the former; flowers twice as large, of a golden uniform yellow or orange; stem much taller; flowers often double, or quilled with the radiate florets funnel-shaped. June to September. Mexico. 1596. A.

These plants are the decoration of most gardens throughout the autumn; the epithets of French and African are quite incorrect, as they were originally brought from Mexico, and are now dispersed all over Europe, and have even reached India and China.

LXIV. *HELE'NIUM*; Helen, the wife of Menelaus is said to have cultivated a plant which destroyed

serpents; according to others it sprang from her tears. Inula Helenum is the ancient plant in Dioscorides, and because of its resemblance to that, the name was bestowed upon the present genus. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 3 Species.

1. H. Autumna'le. *Smooth Helenium.* "Leaves serrate, very smooth;" stems six feet high, many, branching; leaves elliptic, lanceolate, alternate; flowers large, yellow, numerous, on terminal finely downy stalks; florets of the ray marked with strong parallel ribs: whole plant extremely bitter. August to October. North America. 1729. P.

LXV. BOLTO'NIA, in honour of James Bolton, author of the History of British Ferns, and of Fungusses growing about Halifax. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 2 Species.

1. B. Asteroi'des. *Star Wort-flowered Boltonia.* "Leaves most entire;" stem upright, two feet high, even, slightly streaked; leaves alternate, remote, sessile, lanceolate, bent down at the base, rough edged; peduncles one flowered, in a thin panicle; florets of the ray pale flesh-colour, of the disk yellow. August to October. North America. 1758. P.

LXVI. SIGESBEC'KIA, named by Linnæus in honour of Dr. Siegesbeck, superintendant of the Physic Gar-

den at Petersburg. Nat. ord. *Linn.* Composite. *Juss.* Corymbosæ. 3 Species.

1. *S. Occidentalis*. *American Sigesbeckia*. "Leaves opposite, ovate, lanceolate, serrate, stalked, tapering at each end; stem winged," tall; leaves six inches long, undivided, bright green, roughish above, downy beneath, the upper ones sometimes three in a whorl; panicle terminal, forked, leafy; florets of the ray one to three, of a bright yellow. This plant is now arranged as *Verbesina Sigesbeckia*. October, November. Virginia. 1731. P.

2. *S. Flosculo'sa*. *Small-flowered Sigesbeckia*. "Leaves nearly sessile, ovate, toothed; florets of the disk three-cleft, triandrous;" stem much branched, round, slightly scored, somewhat woolly; branches opposite, forked; panicle terminating, loose, leafy, forked; flowers brownish yellow; florets of the ray five. This plant is remarkable, as perhaps the only one in the class Syngenesia, which is triandrous. June, July. Peru. 1784. A.

LXVII. AN'THEMIS, from ανθειναι, to flourish, having an abundance of flowers. Nat. ord. *Linn.* Composite. *Juss.* Corymbiferæ. 39 Species.

* *Florets of the ray white.*

1. *A. Altissima*. *Tall Chamomile*. "Leaves twice wing-cleft; segments lanceolate, toothed; lower teeth reflexed;" chaffs broad, terminated by a bristle; stem

many flowered, five or six feet high, streaked, erect; points of the leaves pale. August. Spain. 1731. A.

2. A. No'bilia. *Common Chamomile.* "Leaves twice pinnate; leaflets three parted, linear, awl-shaped, somewhat woolly; stem branching at the base;" flowers solitary; calyx hairy, with membranous edges; florets of the ray sometimes double, sometimes wanting. July to September. Britain. P.

3. A. Pyre'thum. *Spanish Chamomile, Pellitory of Spain.* "Leaves triply pinnate; leaflets linear; stem decumbent; branches axillary, one flowered;" stems many; root thick, running into the ground like Horse-radish, white, of an acrid biting taste; flower large; the florets of the ray purplish without, white within. June, July. South of Europe. 1570. P.

** *Florets of the ray yellow.*

4. A. Valenti'na. *Purple-stalked Chamomile.* "Leaves triply pinnate; leaflets linear, awl-shaped, pubescent; stem branched, straddling; branches longer than the stem; flower-stalks thickened upwards;" stem about two feet high, purplish; flowers yellow; but there is a variety with the rays white. July, August. South of Europe. 1596. A.

5. A. Tincto'ria. *Ox Eye Chamomile.* "Leaves doubly wing-cleft, serrate, downy beneath; stem erect, branching; seed down membranous, entire;" stem slightly hairy; calyx tiled; florets all yellow, those of the ray broad, three toothed; the flowers

will afford a yellow dye. June to November. Britain. P.

6. A. Ara'bica. *Arabian Chamomile.* "Leaves pinnate; leaflets three parted, linear; stem profliferous; flowers solitary;" stem purplish, slightly downy, leafy; leaves scattered, terminating; flower sessile, of a bright yellow; florets of the ray twelve to eighteen, with three teeth. July, August. Barbary. 1759. A.

The Common Chamomile and the Pellitory of Spain are both articles of the *Materia Medica*. The first is well known for the use of its flowers in tea as a stomachic and anti-spasmodic; they have also been effectually substituted for Peruvian Bark. The root of the latter possesses strong stimulating qualities: on being chewed it excites a glowing heat, producing a discharge of saliva, which relieves rheumatic affections of the face and teeth.

LXVIII. ACHILLE'A, from Achilles, who is supposed to have learned botany from his master, Chiron. Nat. ord. Linn. Compositæ. Juss. Corymbiferae. 45 Species.

* Leaves undivided.

1. A. Herbaro'ta. *Herbarota Milfoil.* "Leaves linear, tapering at the base, serrate, smooth; stem smooth," bending, two or three inches high, ending in a corymb of five or six white flowers; leaves oblong, blunt, in two or three parcels; plant green, odorous. June to August. Piedmont. 1640. P.

2. A. Ptarmica. *Common Sneeze Wort, Goose*

Tongue. “Leaves linear, acute, equally and sharply serrate, smooth;” stem one or two feet high, upright, firm, a little woolly, tinged with red; leaves alternate, half stem-clasping; florets in the disk numerous, dirty yellow; in the ray eight or ten, white; when double these flowers make a tolerable appearance in gardens, and are by some called Bachelor’s Buttons. A plant from the Alps, *A. Alpinum*, seems to be only a variety of this. July to November. Britain. P.

3. *A. Ageratum.* *Sweet Milfoil, or Maudlin.* “Leaves oblong, obtuse, serrate, tapering towards the stalk; corymb of flowers compound, dense;” stems several, eighteen inches high, slender, pale green or reddish, covered with abundance of leaves; flowers yellow, odorous. August to October. 1570. P.

** *Leaves wing-cleft.*

4. *A. Clavennæ.* *Silver-leaved Milfoil.* “Leaves woolly, wing-cleft; segments linear, obtuse, the upper toothed at the apex; corymb simple;” stem about a span high; flowers white: whole plant hoary. June, July. Austria. 1656. P.

5. *A. Impatiens.* *Impatient Milfoil.* “Leaves wing-cleft, pectinate or comb-like, smooth; segments linear, acute; the lower leaflets two parted; corymb of flowers simple;” stem shining, slightly streaked, red at bottom, leafy; flowers white, large. June to September. Siberia. 1759. P.

*** *Leaves pinnate.*6. A. Santoli'na. *Lavender Cotton-leaved Milfoil.*

"Leaves pinnate, somewhat woolly; leaflets three parted, across, distant; segments three toothed; stem branching;" flowers large, yellow, standing upon pretty long foot-stalks, singly, not in clusters; its leaves are somewhat like Lavender Cotton, and when rubbed emit a strong oily odour. June to August. The Levant. 1759. P.

7. A. Macrophylla. *Feverfew-leaved Milfoil.*

"Leaves pinnate, smooth; leaflets lanceolate, cut, serrate, the lowest confluent; corymb simple;" stems many, three feet high, having loose branching corymbs of white flowers at the top, resembling those of A. Ptarmica, but larger. July, August. Italy. 1710. P.

**** *Leaves doubly pinnate.*8. A. Millefolium. *Common Milfoil, or Yarrow.*

"Leaves twice pinnate, naked; segments of the leaflets linear, toothed; stems furrowed towards the top," a foot high or more; leaves alternate, a little hairy beneath; flowers in a close broad-topped corymb; florets of the disk dirty yellow, about fifteen, of the ray white, about five; flowers sometimes in gardens purple or red. June to October. Britain. P.

9. A. No'bilis. *Showy Milfoil.* "Stem leaves twice pinnate; leaflets linear, toothed; the rib winged, toothed; root leaves triply pinnate; corymb com-

pound, level topped;" stem about two feet high, erect, roughish; leaves pubescent, pale green; flowers smaller than the last, in very crowded corymbs; scent stronger. June to August. Germany. 1640. P.

10. A. Tomento'sa. *Woolly Milfoil.* "Leaves twice pinnate, woolly; leaflets crowded; segments linear, lanceolate, entire; corymb compound;" stems many, leafy, a foot high; leaves finely cut; flowers of a fine yellow; the smell pleasantly aromatic. May to October. South of Europe. 1648. P.

11. A. Abrotanifo'lia. *Southernwood-leaved Milfoil.* "Leaves doubly pinnate, downy; leaflets very slender, linear, entire, distant; corymbs compound, level topped;" stem two feet and a half high, having large corymbs of yellow flowers at top, leaves something like those of Common Wormwood. June, July. The Levant. 1739. P.

Linnæus recommends the bruised leaves of Common Yarrow as an excellent vulnerary and styptic. Some Alpine species, it is said, lose their medical powers if cultivated in gardens, as they owe their efficacy to their peculiar situation; others cannot be cultivated at all deprived of the pure air which they have been accustomed to enjoy.

LXIX. *BURPHTHAL'MUM*, from ΒΟΥΡ, an ox, and οφθαλμος, an eye. Nat. ord. Linn. Composite. Juss. Corymbiferae. 20 Species.

1. B. Spino'sum. *Prickly Ox Eye.* "Leaves alternate, oblong, lanceolate, stem-clasping, entire,

hairy; calyxes leafy, pointed;" stem a foot and a half high, with two or three alternate branches; root leaves long, spreading; flowers yellow, solitary, terminal; florets of the ray numerous, very narrow; leaves of the calyx nine, star-like, prickly. June to September. Italy. 1570. A.

2. B. *Aquaticum*. *Sweet-scented Ox Eye*. "Calyxes obtusely leaved, sessile, axillary; leaves alternate, oblong, obtuse; stem herbaceous, forked," a foot high, branched, cylindrical, downy; leaves alternate, sessile; flowers yellow, rather small; outer calyx leaves soft, forming a sort of involucre. July, August. South of Europe. 1731. A.

3. B. *Salicifolium*. *Willow-leaved Ox Eye*. "Leaves alternate, lanceolate, somewhat serrate, downy; calyxes naked; stem herbaceous," a foot and a half high, straight, cylindric, reddish, a little branched at top; leaves embracing; flowers large, deep yellow, solitary, terminal; florets of the ray narrow. June to October. Austria. P.

4. B. *Grandiflorum*. *Great-flowered Ox Eye*. "Leaves alternate, lanceolate, somewhat toothed, smooth; calyxes naked; stem herbaceous," numerous, growing in tufts, simple, a foot and a half high; flowers yellow, large, about two inches in diameter, terminal; calyx rather short. June to October. Austria. 1722. P.

5. B. *Helianthoides*. *Sun Flower-leaved Ox Eye*.

"Leaves opposite, ovate, serrate, triply nerved; calyxes leafy; stem herbaceous;" stems several, six feet high, upright, branched at the top, naked at the base; branches opposite, stiff; leaves remote; leaf-stalks embracing the stem, with a kind of ring; flowers terminating, yellow, two or three inches broad; florets of the ray about twelve; flower-stalks commonly three. This plant has the generic characters of Buphthalmum, the calyx of Silphium, or Rudbeckia, and the habit of Helianthus, hence it has been inadvertently given by Linnaeus under four different names. July to October. North America. 1714. P.

LXX. SANVITA'LIA; this name is not explained. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 2 Species.

1. S. Procumbens. *Trailing Sanvitalis.* "Stem procumbent; leaves ovate, entire;" stem much branched, downy; leaves opposite, three ribbed, stalked, downy; flowers terminal, solitary; the disk dark purple; rays yellow. July, August. Mexico. 1798. A.

LXXI. ZIN'NIA, named by Linnaeus in honour of Dr. ZINN, professor of physic and botany at Gottingen, 1757. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 5 Species.

1. Z. Pauciflora. *Yellow Zinnia.* "Flowers sea-

sile; leaves somewhat heart-shaped, sessile, clasping the stem," which is erect, four feet high, branched, angular, leafy; leaves opposite, reflexed, roughish; flowers solitary; disk brownish; rays yellow; uppermost pair of leaves close to the calyx. July, August. Peru. 1753. A.

2. Z. Multiflo'ra. *Many-flowered Zinnia.* "Flowers stalked; leaves opposite, ovate, lanceolate;" stem and branches erect, covered with soft hairs, channelled; leaves three nerved, hairy; flowers terminating; florets of the ray deep yellow, copper-colour or scarlet. June to October. North America. 1770. A.

3. Z. E'legans. *Purple-flowered Zinnia.* "Flowers stalked; leaves opposite, ovate, heart-shaped, sessile, clasping the stem, harsh on both sides; scales of the receptacle jagged and fringed, tubular; florets with a hairy disk;" stem erect, six feet high, branched its whole length; peduncles one flowered, thickened at top; florets of the ray ten to twenty, red or violet above, whitish beneath; florets of the disk yellow. June to August. Mexico. 1796. A.

4. Z. Tenuiflo'ra. *Slender-flowered Zinnia.* "Flowers stalked; leaves opposite, ovate, lanceolate, pointed; calyx cylindric; florets of the ray linear, revolute;" stem three feet high, erect, rugged, branched; peduncles one flowered, thickened at the top, hollowed; florets of the disk yellowish, of the ray orange red above, paler beneath; flowers smaller than any of the preceding. July, August. Mexico. 1799. A.

Order Frustanea.

LXXII. CENTAURE'A, from the Centaur Chiron, who cured a wound received by the falling of one of the arrows of Hercules on his foot by its use. Nat. ord. Linn. Compositæ. Juss. Cinaro-cephalæ. 121 Species.

* Jaceæ. *Calyxes smooth, unarmed.*

1. C. Crupi'na. *Black-seeded Centaury, or Beard-ed Creeper.* "Calyx unarmed; scales lanceolate; leaves pinnate, rough; leaflets linear, acute, finely serrate; stem three feet high, scored, almost simple; flowers terminal; florets in the disk three, in the ray five;" usually one or two seeds only ripen, crowned with a black down so stiff as to make the seeds creep when held in the hand, whence its name from the Dutch *Cruypen*, to creep. June, July. Italy. 1596. A.

2. C. Moscha'ta. *Sweet Sultan or Centaury.* "Calyxes downy, scales roundish, rather obtuse; leaves slightly wing-cleft, lowest segments nearly entire;" stem two feet high, channelled, smooth, branched; flowers terminal, solitary, pale purple, red or white, with a powerful odour. July to October. Persia. 1629. A.

3. C. Suave'olens. *Yellow Sweet Sultan.* "Calyxes smooth, scales roundish, egg-shaped, shrivelling at the tip; leaves lyrate, wing-cleft;" stem a foot and

a half high; flowers bright yellow; outer florets larger than in the preceding. July to October. The Levant. 1683. A.

4. C. Centau'rium. *Great Centaury.* "Calyx scales egg-shaped, obtuse; leaves pinnate, smooth; leaflets sharply double serrate, decurrent, terminal one lanceolate;" stems four or five feet high, upright, cylindrical, smooth, branched; leaves large, green; flowers terminal, large, yellow. July, August. Italy. 1596. P.

** Cyanoidea. *Calyx scales bristly, fringed.*

5. C. Phry'gia. *Austrian Centaury.* "Calyxes recurved, feathery; leaves oblong, undivided, rough, finely serrate, pointed;" stem a foot and a half high, shrubby, angular, scored, downy, branched towards the top; flowers terminal, solitary, purple. June to October. Austria. 1633. P.

*** Cyani. *Calyx scales fringed, serrate, not skinny.*

6. C. Monta'na. *Mountain Centaury or Blue Bottle.* "Calyxes serrate; leaves smoothish, lanceolate, quite entire, decurrent; stem simple," upright; flowers blue, purple, or white, larger than the next species; calyx scales black at the edge. June to August. Austria. 1596. P.

7. C. Cy'anus. *Corn Blue Bottle.* "Calyxes serrate; leaves linear, quite entire, sessile, lower ones toothed; stem branching, many flowered," erect,

branched, somewhat woolly ; flowers terminal, solitary ; florets of the disk purplish ; anthers black ; florets of the ray when wild always blue, but in gardens varying to all colours but yellow. June to August. Britain. A.

8. C. Ragusi'na. *Cretan Centaury.* " Calyxes fringed ; leaves downy, wing-cleft ; segments obtuse, egg-shaped, quite entire, outer ones longest ; stems three feet high, simple, cottony ;" leaves remaining all the year, alternate, cottony, white, soft ; flower yellow, large, terminal ; florets all of the same size. June, July. Candia. 1710. P. Gr. Ho.

9. C. Cinera'ria. *White-leaved Mountain Centaury.* " Calyxes fringed ; leaves downy, very white, doubly wing-cleft ; segments lanceolate, obtuse ;" stem a foot high, cottony, with two or three short branches near the top ; flowers purple, large, terminal ; calyx roundish. July, August. Italy. 1710. P. Gr. Ho.

10. C. Scabio'sa. *Greater Knapweed.* " Calyx scales fringed, downy, egg-shaped ; leaves wing-cleft ; segments lanceolate, sometimes toothed, a little hairy ;" stem two or three feet high, erect, branched, furrowed ; flowers purple, large, terminal ; florets of the ray long : it varies by cultivation to white, flesh-coloured, or yellow. June to August. Britain. P.

**** Rhaponticoidea. *Calyx scales dry and skinny, fringed, serrate.*

11. C. Sibi'rica. *Siberian Centaury.* " Calyx

scales egg-shaped, obtuse, fringed; leaves downy on both sides, wing-cleft and undivided;" stem declining, a span high; upper lobe of the leaves very large; flower purple or flesh-coloured, often single, with a large ray of barren florets. July, August. Siberia.

1782. P.

**** Rhapontica. *Calyx scales dry and skinny, neither fringed nor spinous.*

12. C. Splen'dens. *Skinny Centaury.* "Calyxes egg-shaped, skinny; scales pointed; lower leaves twice wing-cleft; segments linear; upper leaves pinnate: leaflets linear, sometimes toothed;" stems two or three feet high, angular, hard, smooth, many flowered; leaves smooth, or slightly woolly; flowers purple, with a beautiful silvery calyx. July, August. Spain. 1597. B.

13. C. Glastifo'lia. *Woad-leaved Centaury.* "Calyxes skinny; leaves undivided, quite entire, decurrent;" stem four feet high, somewhat winged with the decurrent leaves; root leaves shaped like those of Woad, ovate, lanceolate, on long stalks, with prominent veins; flower bright yellow, terminal; outer florets smaller; calyx scales loose, silvery. June to August. Siberia. 1731. P.

14. C. Rhapon'tica. *Swiss Centaury.* "Calyx scales torn; leaves ovate, oblong, finely toothed, downy beneath;" stem from one to four feet high;

root leaves numerous, somewhat heart-shaped, on long stalks; stem leaves few; flower purple, solitary, large, without any barren glares. July, August. Switzerland. 1640. P.

15. C. Conifera. *Cone Centaury.* "Calyxes skinny; leaves cottony; root ones lanceolate; stem ones wing-cleft; stem simple, a span high, upright, scored, cottony;" flower very large, purple, terminal; calyx shaped like a Pine cone; scales skinny, transparent, the upper ones reddish. June to September, South of Europe. 1683. P.

***** *Stoebe.* *Scales of the calyx with spines, palmate or hand-shaped at the tip.*

16. C. Solstitialis. *St. Barnaby's Star Thistle.* "Calyx palmate, spinous, solitary; spines straight; leaves lanceolate, decurrent, not prickly; root leaves lyrate;" stem near two feet high, alternately branched; leaves slightly cottony, whitish; flowers bright yellow, terminal, scarcely rayed: the whole of the plant clothed with a cotton-like web; spines yellowish. July, August. England. A.

17. C. Roma'na. *Roman Centaury.* "Calyxes palmate, spinous; spines reflexed; leaves lanceolate, sessile, decurrent, hairy, rough, but not prickly, finely toothed; root leaves lyrate;" stems three feet high; flowers large, red. C. Napifolia scarcely differs from this. July to September. Rome. 1739. B.

***** *Calcitrapæ. Spines of the calyx compound.*

18. *C. Benedic'ta. Blessed Thistle or Centaury.*
 " Calyx doubly spinous, woolly, involucred; leaves half decurrent, toothed, spineous;" stems a foot and a half high, reddish, woolly, branched; leaves oblong, with a white nerve; flowers yellow, terminal; involucre of ten leaves. June to September. Spain.
 1548. A.

19. *C. Colli'na. Italian Hill Centaury.* " Calyxes fringed, spinous; stem leaves wing-cleft; root leaves doubly wing-cleft; segments lanceolate;" stem two or three feet high, angular, nearly smooth, branched; leaves large, greenish; flowers yellow, rather large, terminal, solitary. June, July. South of Europe.

1596. P.

***** *Crocodiloidea. Spines of the calyx simple.*

20. *C. Salman'tica. Ragwort-leaved Centaury.*
 " Calyxes globular, smooth; spines very small, weak, a little reflected; leaves lanceolate, serrate; root leaves lyrate; stem straddling," three feet high, a little woolly towards the base; branches simple, slender; lower leaves soft, hairy; flowers purple or white, terminal, solitary; barren florets not larger than those of the centre. July, August. South of Europe.

1596. B.

21. *C. Au'rea. Great Golden Centaury.* " Calyxes simply spinous; spines spreading; florets equal; leaves hairy, lower ones wing-cleft;" stem two feet

high, hairy; leaves sessile; flowers bright yellow, large, terminal. July to September. South of Europe. 1758. P.

22. *C. Muricata*. *Muricated Spanish Centaury*. "Calyxes simply spinous, woolly; lower leaves lyrate, toothed, upper ones lanceolate; flower-stalks very long;" stem a foot high, or a little more, inclining, slightly woolly, somewhat branched; flowers purple; spines of the calyx brown, very sharp. July, August. Spain. 1621. A.

23. *C. Crocodylium*. *Blush-flowered Centaury*. "Calyxes skinny, simply spinous; leaves wing-cleft, quite entire, terminal segments larger, toothed;" stem a foot and a half high, angular, rough to the touch; branches spreading, loose; flowers on long stalks, barren; florets large, purple, fertile ones whitish; calyx scales silvery, green. July, August. The Levant. 1777. A.

This extensive genus seems to have been formed by Linnæus as a kind of receptacle for such plants as would have been placed in some other genus of compound flowers, if they had not had a ray of abortive funnel-shaped florets; some later botanists have made distinct genera of the different sections. Nos. 2, 4, 6, 7, are very commonly cultivated in gardens, the remaining species described are occasionally seen, and perhaps some few others, but the rest of the tribe, from their thistly habit, are generally neglected. *C. Centaurium* is the *Centaurea* of the Latin poets. *C. Benedictus* obtained its name from its supposed extraordinary medical virtues, it is intensely bitter, and.

may be employed as a tonic to some advantage; it has however lost much of its reputation in modern practice.

LXXIII. ZOE'GRIA, from Dr. John Zoega, who published a Flora Islandica, 1772. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 1 Species.

1. Z. Septau'rea. *Yellow Zoegria.* Stem much branched, spreading in every direction, leafy, angular, roughish, twelve to eighteen inches high; leaves alternate; distant, roughish, entire, the lower wing-cleft; flowers solitary, on long terminal stalks, large, near two inches broad, yellow. July, August. The Levant. 1779. A.

LXXIV. RUDBECK'IA, in honour of Olof Rudbeck, father and son, predecessors to Linnæus in the botanical chair at Upsal. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 9 Species.

1. R. Lacinia'ta. *Broad Jagged Rudbeckia.* "Lower leaves pinnate; leaflets ovate, unequal at the base, toothed, somewhat three lobed, upper ones undivided, or three cleft, ovate, oblong, rough;" stems from five to eight feet high, erect, branched, furrowed; flowers large, terminal, on long solitary stalks, erect; rays full yellow; disk brown. June to September. North America. 1640. P.

2. R. Digit'a'ta. *Narrow Jagged Rudbeckia.* "Lower leaves pinnate; leaflets wing cleft, upper ones deeply three cleft, lanceolate, partly cut; stem

smooth;" a plant resembling the former; flowers smaller; leaves narrower. August, September. North America. 1759. P.

3. R. Pinna'ta. *Fragrant pinnated Rudbeckia.* "Root leaves pinnate; stem leaves lobed; top leaves undivided; stem rough;" flowers large; rays deep yellow, numerous, broad, downy; disk ovate, dark purple, smelling like anise: plant minutely rough. August, September. North America. 1803. P.

4. R. Trilo'ba. *Three lobed Rudbeckia.* "Leaves spoon-shaped, the lower three lobed, the upper undivided; stem hairy, much branched; calyx leafy; scales of the receptacle with prominent points;" stem four or five feet high, leafy, scored, rough, with reflected hairs; flowers rather small, pale yellow; disk convex. August, September. Virginia. 1699. B.

5. R. Hir'ta. *Great Hairy Rudbeckia.* "Rough, with bristly hairs; stem slightly branched, single flowered; flower stalk elongated, naked; leaves undivided, ovate, somewhat spoon-shaped, triply ribbed, serrate; calyx leafy; scales of the receptacle lanceolate, hairy;" stem about two feet high, rough, hairy; flower rather large, with a brown disk and long yellow rays. June to November. North America. 1714. P.

6. R. Ful'gida. *Small Hairy Rudbeckia.* "Stem hispid; branches straight, single flowered; leaves oblong, lanceolate, triply ribbed, toothed, rough; contracted, somewhat heart-shaped at the base; ca-

lyx leafy;" stem branched; flowers smaller than the last; disk dark purple; rays orange; scales of the calyx shorter, broader. July, August. North America. 1780. P.

7. *R. Amplexifo'lia*. *Stem clasping Rudbeckia*. "Leaves elliptic, oblong, heart-shaped at the base, naked, rough-edged, the lower ones serrate; stem smooth, scored; disk nearly cylindric;" stem erect, branched, leafy, two feet high; leaves pale, glaucous, netted with veins; flowers solitary, with broad, deep, yellow rays, having two or three blunt teeth. July, August. Louisiana. 1793. A.

8. *R. Purpu'rea*. *Purple Rudbeckia*. "Leaves, rough, ovate, tapering at the base, undivided, toothed, the upper ones lanceolate, entire; rays very long, pendulous, cloven;" stems three or four feet high, purplish; leaves triply ribbed, long; flowers terminal, solitary, large, beautiful, singular; disk brown, with long spinous scales; ray pink, or light crimson. July to October. North America. 1699. P.

LXXV. *COREOP'SIS*, from κόρης, a bug, and οὐεις, appearance; from the fancied resemblance of the seed to that insect. Nat. ord. *Linn. Compositæ*. Juss. *Cerymbiferæ*. 25 Species.

1. *C. Verticilla'ta*. *Whorl-leaved Coreopsis, or Tick seed Sun Flower*. "Leaves in whorls, ternate, quinate, or pinnate; leaflets linear, three parted or undivided;" stem from two to three feet high, erect,

scored; flowers terminal; disk brown; ray yellow. July to October. Virginia. 1759. P.

2. C. Trip'teris. *Three-leaved Coreopsis.* "Lower stem leaves pinnate, upper ones ternate, uppermost simple; stalked; leaflets lanceolate, linear;" stems three to six feet high; flowers solitary, in a loose corymbus, with a yellow ray and brown disk; florets of the ray pointed, or with two teeth. August to October. North America. 1737. P.

3. C. Lanceola'ta. *Spear-leaved Coreopsis.* "Leaves lanceolate, quite entire, fringed;" stems several, a foot and a half high, decumbent at bottom, then rising obliquely; root leaves long, spreading; flowers large, yellow; florets of the ray eight or nine, four-toothed. July to September. Carolina. 1724. B.

4. C. Alternifo'lia. *Alternate-leaved Coreopsis.* "Stem winged; leaves lanceolate, on short stalks, serrate; flowers in corymbs; florets of the ray lanceolate;" stems several, from five to seven feet high, erect, simple; leaves rugged, dirty green, narrowed at the base; flowers yellow; calyx much branching; florets of the ray distant. September to November. North America. 1640. P.

LXXVI. HELIAN'THUS, from ἥλιος, the sun, and ἄνθος, a flower. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 21 Species.

1. H. Au'nuus. *Annual Sun Flower.* "All the leaves heart-shaped, three nerved; flower-stalks thick-

ending at top; flowers nodding;" stem single or branched, from six to ten feet high; leaves alternate, on long stalks, hanging down; flowers commonly single, a foot in diameter; florets of the ray bright yellow, of the disk darker, very numerous. *H. Indicus* seems to be a small variety of this, about three feet high, leaves darker, flowers less nodding. June to October. Mexico, Peru. 1596. A.

2. *H. Multiflorus*. *Perennial Sun Flower*. "Leaves three nerved, rough, lower heart-shaped, upper ovate; florets of the ray numerous; scales of the calyx lanceolate;" stems many, five to eight feet high, branching; the stem and each branch terminated by a flower, yellow, commonly double; leaves some opposite, some alternate. August to October. Virginia. 1597. P.

3. *H. Tuberosus*. *Jerusalem Artichoke*. "Leaves three nerved, rough, lower heart-shaped, upper ovate, acuminate, alternate; leaf-stalks fringed at the base;" stems several, rough, hairy, streaked, twelve feet high; leaves light green, rough; branches many, long; flowers small; florets in the ray about twelve; roots creeping, with many tubers clustered together, from thirty to fifty on one plant. September, October. Brazil. 1617. P.

4. *H. Decapetalus*. *Ten petaled Sun Flower*. "Leaves ovate, acuminate, remotely serrate, three nerved, rough; scales of the calyx lanceolate, somewhat equal, a little fringed; florets of the ray ten or

twelve;" much resembling *H. Multiflorus*; stem rough, but smooth at the bottom; flowers yellow. August to November. Canada. 1709. P.

5. *H. Strumosus*. *Carrot root Sun Flower*. "Leaves ovate, acuminate, serrate, three nerved, rough beneath; scales of the calyx linear, lanceolate, fringed at the base; root spindle-shaped," white, fleshy; stems several, somewhat hairy, streaked; branches numerous; leaves alternate, slightly notched at the edges; flowers in terminating corymbs, pale yellow. July to September. Canada. 1710. P.

6. *H. Giganteus*. *Gigantic Sun Flower*. "Leaves alternate, lanceolate, serrate, rough, obscurely three-nerved, tapering, nearly sessile, fringed at the base; scales of the calyx lanceolate, fringed;" stem ten feet high, green, rough; florets of the ray about twenty, cleft at the end, yellow; the disk blackish; upper two leaves of each branch opposite; flowers nodding. September, October. North America. 1714. P.

7. *H. Altissimus*. *Tall Sun Flower*. "Leaves alternate, lanceolate, serrate, rough, three nerved, tapering at the apex, stalked; leaf-stalks fringed; scales of the calyx lanceolate, fringed;" of the same height and structure as the last; leaves not one-fourth in breadth; stem smooth, purplish; about sixteen florets in the ray; disk greenish. August, September. Pennsylvania. 1731. P.

8. *H. Augustifolius*. *Narrow-leaved Sun Flower*. "Leaves alternate, linear;" stem purplish, a foot

and a half high ; leaves acuminate, rough, rolled back at the edge, pale beneath ; disk of the flower brown, of the ray deep yellow, notched. September, October. North America. 1789. P.

9. *H. Divaricatus*. *Rough-leaved Sun Flower.*
" Leaves opposite, sessile, ovate, oblong, three nerved ; panicle forked ;" stem about six feet high, even at top, with scattered rough hairs, purple, with a glaucous bloom ; flowers in a panicle, with three forked branches, yellow, small. August to October. North America. 1759. P.

10. *H. Atrorubens*. *Dark red Sun Flower.*
" Leaves opposite, spoon-shaped, crenate, three nerved, rough ; scales of the calyx erect, as long as the disk ;" stem commonly single, from two to three feet high, dusky purple, rough, with hairs ; florets of the disk red, of the ray dark yellow, marked with a few lines. July to September. North America. 1782. P.

Many of the species of this genus, as well as of the two preceding genera, from their conspicuous size, are the common autumnal ornament of the border. The stately Annual Sun Flower seems to have derived its name from its radiate resemblance to the great luminary, rather than from the supposed quality of following its progress, since the flowers may be seen pointing to all quarters of the compass at the same time. The blossom is, perhaps, the largest of the tribe of Flora, being in Peru sometimes two feet in diameter, and the stem rising twenty feet high ; its seeds are excellent food for domestic poultry ;

from them an excellent oil may be extracted. Perennial Sun Flower is, if possible, still more cultivated in our gardens; the single sort is not commonly seen, being excluded by the double, which thrives every where, even in the smoke of large towns: it is in great favour at Paris. Jerusalem Artichoke, corrupted from the Italian *Girasole*, or Turnsole, is so called from the resemblance of its tuberous roots, when boiled, to the flavour of artichoke bottoms; these have the reputation, however, of being a very flatulent food. The root of *H. Strumosus* is eaten in Canada, and is said to be aromatic and agreeable.

Order Necessaria.

LXXXVII. BALTIMO'RA, by Linnæus, in honour of Lord Baltimore, proprietor of Maryland, in North America. Nat. ord. *Linn.* Compositæ. Juss. Corymbiferæ. 1 Species.

1. B. Ree'ta. *Upright Baltimora.* An upright plant, two feet high; stem four cornered, channelled, green, rugged at the angles; branches short, lateral; leaves opposite, stalked, ovate, pointed, serrate, three nerved, somewhat woolly; flowers yellow, in terminal panicles; florets of the disk woolly, with black anthers. July. Vera Cruz. 1699. A.

LXXXVIII. OTHON'NA, from οθων, a napkin; some of the species having a nap or down. Nat. ord. *Linn.* Compositæ. Juss. Corymbiferæ. 35 Species.

1. O. Cheirifo'lia. *Stock-leaved African Rag Wort.* " Leaves lanceolate, three nerved, entire;

stem somewhat shrubby, creeping;" leaves greyish, sessile, thickish; flowers on long thick succulent stalks; terminal and axillary, yellow; rays pointed, scarcely longer than the calyx; a tender plant, but may be preserved in a sheltered situation. The rest of the species are Cape plants, requiring the protection of the Green-house. April to June. Barbary.

1752. S.

LXXIX. CALEN'DULA, by some thought to be a diminutive of Caltha, by others from Calendæ, the Latin term for the first day of every month; the plant continuing long in flower. Nat. ord. Linn. Composite. Juss. Corymbiferæ. 25 Species.

1. *C. Arven'sis*. *Field Marygold*. " Seeds boat-shaped, prickly, incurved, outer ones erect, lanceolate, awl-shaped, prickly on the back;" stem slender, branching, spreading; leaves narrow, spear-shaped, hairy, half stem-clasping; flowers small, pale yellow, on long stalks. May to September. Europe. 1597. A.

2. *C. Officina'lis*. *Common Marygold*. " All the seeds boat-form, prickly, bent in;" stem loftier, more branched than the former, angular, downy; leaves sessile, lower spoon-shaped, upper lanceolate; flowers deep yellow, varying to double, large, very double, double lemon coloured; greater and smaller childing Marygold. June to September. South of Europe. 1763. P.

3. *C. Stella'ta*. *Starry Marygold*. " Seeds boat,

shaped, incurved, prickly, five outer ones ovate, lanceolate, membranous and toothed at the margin, prickly on the back;" stem rugged, three feet high, scared, branched; leaves ovate, oblong, toothed, somewhat fringed, bright green; flowers yellow: florets of the ray sixteen, equal in number to the divisions of the calyx; florets of the disk few, barren. June to September. Barbary. 1795. A.

4. C. Inca'na. *Hoary Marygold.* " Seeds boat-shaped, even, outer ones awl-shaped, erect, a little prickly; leaves oblong, spoon-shaped, downy on both sides;" whole plant white with down: flowers yellow. June to August. Barbary. 1798. A.

5. C. Pluvialis. *Small Cape Marygold.* " Leaves oblong, lanceolate, toothed in a sinuate manner; stem leafy; flower-stalks thread-shaped;" stems declining, slender; flowers simple, terminating; disk purple; ray violet without, white within, opening only when the sun shines. June to August. The Cape. 1699. A.

6. C. Hybrida. *Great Cape Marygold.* " Leaves oblong, lanceolate, toothed; stem leafy; flower-stalks thickened at the top;" leaves larger than in the former, broader at the end; flowers smaller, but of the same colour. June, July. The Cape. 1752. A.

7. C. Nudicaulis. *Naked stalked Cape Marygold.* " Leaves lanceolate, toothed in a sinuate manner; stem nearly naked," perfectly simple, erect, leafy near the bottom; leaves rugged: a plant much resembling C. Pluvialis, but the leaves are more deeply

indented; flower a little smaller, of a fainter purple.
June to August. The Cape. 1731. A.

The Common Marygold is one of the eldest denizens in the English Gardens; it early attracted notice from the regular expansion and closing of the flowers about the hours of nine and three; the florets of the ray, either fresh or dried, are sometimes boiled in broth, from a fancy that they are comforters of the heart and spirits; numerous medical virtues were attributed to the plant, which have now lost their credit.

LXXX. I'VA, supposed to be a name of barbarous origin. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 4 Species.

1. I. Frutes'cens. *Shrubby Ivy, Bastard Jesuit's Bark Tree.* "Leaves lanceolate, rough, dotted, deeply serrate; stem shrubby," eight or ten feet high, with woody branches, terminated by small clusters of pale purple flowers. August. North America. 1711. S.

LXXXI. FILA'GO, from *filum*, thread, and *ago*, to produce; in allusion to the cottony web of the plant. Nat. ord. Linn. Compositæ. Juss. Coryntheiforme. 1 Species.

1. F. Pygmaea. *Cotton Rose.* "Stems sometimes none, sometimes three or four inches high; whole plant covered with a white cottony web.; leaves scattered, obovate, or spoon-shaped, entire, sus-

rounding the little heads of flowers; florets of the ray rose-coloured, of the disk yellow." This is the only plant now remaining in the genus *Filago*; some species that were formerly arranged under it being removed to *Gnaphalium*. July, August. South of Europe. 1629. A.

LXXXII. *MICROPUS*, from *μικρός*, small, and *πούς*, a foot. Nat. ord. *Linn.* Compositæ. Juss. Corymbiferæ. 2 Species.

1. *M. Supinus*. *Trailing Micropus*. "Leaves opposite, ovate, wedge-shaped;" stems prostrate, numerous, three or four inches long, covered with a silvery nap, as is the whole plant; leaves in pairs, plaited, three nerved; flowers axillary, sessile, from the base to the top of the stem, minute, in small tufts, white, very downy. June to September. South of Europe. 1710. A.

LXXXIII. *POLYM'NIA*, from the muse of that name. Nat. ord. *Linn.* Compositæ. Juss. Corymbiferæ. 3 Species.

1. *P. Canaden'sis*. *Canadian Polymnia*. "Leaves toothed, pointed, lower ones wing cleft, the upper three lobed, or entire; stem two to six feet high, downy, viscid, with a balsamic scent;" branches and leaves alternate; flowers terminal, few or solitary, yellow, not handsome. July, August. North America. 1763. P.

2. P. Uvedalia. *Broad-leaved Polymnia*. "Leaves three lobed, acute, deeply sinuated, running down into the foot-stalks;" stem about six feet high; leaves opposite; not unlike those of a plane tree; flowers yellow, two inches wide, in a terminal cluster; outer calyx large, leafy. August to October. Virginia. 1699. P.

LXXXIV. PARTHENIUM, from *παρθενος*, a virgin; for its supposed efficacy in female complaints. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 2 Species.

1. P. Integrifolium. *Entire-leaved Bastard Feverfew*. "Leaves undivided, oblong, toothed;" stem about three feet high, harsh; leaves rigid, upper ones clasping the stem, the lower stalked; flowers in dense corymbose panicles, white; said to droop at the approach of night. June to October. Virginia. 1681. P.

LXXXV. SILPHIUM, from the *σιλφιον* of Dioscorides; which however appears to have been an umbellate plant. Linnaeus goes very far therefore in applying it to the present genus. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 11 Species.

1. S. Lacinia'tum. *Jagged-leaved Silphium*. "Radical and stem leaves both pinnate, their segments deeply toothed; stem hispid," from eight to twelve feet high, simple, round, leafy; leaves alternate,

stalked, two feet long, a foot wide, strongly ribbed; flowers large, yellow. July to September. The Mississippi. 1781. P.

2. S. Terebinthina'ceum. *Broad-leaved Silphium*. "Leaves alternate, ovate, serrate, rough; radical leaves heart-shaped;" stem smooth, about five feet high, panicled at top, with bright yellow, rather drooping flowers, about three inches wide; radical leaves a foot long, and nearly as broad, leathery, rough. August, September. Louisiana. 1765. P.

3. S. Perfolia'tum. *Square stalked Silphium*. "Leaves opposite, triangular, stalked, perfoliate, rough like a file; stem square, smooth," six feet high, even; flower-stalk terminating from the axil of the last leaves; flowers yellow, with twenty-four rays; leaf-stalks stem-clasping. July to October. North America. 1766. P.

4. S. Conna'tum. *Round stalked Silphium*. "Leaves opposite, distantly serrate, rough, combined at the base, ovate, oblong; stem round, rough," rugged, with hairs bent down; panicle of flowers terminating, forked; florets of the disk many, of the ray twelve, all yellow. July to October. North America. 1765. P.

5. S. Asteris'cus. *Hairy stalked Silphium*. "Leaves opposite or alternate, sessile; oblong, hairy, lower ones serrate; stem round, hairy," about three feet high, spotted with purple, upper part of the stem dividing into a few branches, terminated each by a

yellow flower, like the Perennial Sun Flower, but smaller; florets of the ray about nine. July to September. North America. 1732. P.

G. S. Trifolia'tum. *Three-leaved Silphium.* "Leaves three in a whorl, ovate, lanceolate, rough, with tooth-like unequal serratures; panicle three forked; stem with six angles, smooth," six feet high, leafy, purplish; flowers about two inches broad, solitary, on long stalks. July to October. North America. 1755. P.

These plants being very conspicuous, with much the aspect of Sun Flowers, they afford variety and effect in large borders or shrubberies; in some of the species the horns of the seed are wanting.

Order Segregata.

LXXXVI. ECHI'NOPS, from ἔχων, a hedge-hog, and οὐεις, an appearance; on account of its round prickly heads. Nat. ord. Linn. Composite. Juss. Cynaro-cephalæ. 6 Species.

1. E. Sphæroce'phalus. *Great Globe Thistle.* "Leaves wing cleft, white and cottony beneath, downy above; stem branching, four or five feet high;" leaves a foot long; heads of flowers numerous, terminal, globose, white or bluish, viscid to the touch, with a faintish smell. July, August. Austria. 1596. P.

2. E. Spino'sus. *Thorny headed Globe Thistle.* "Heads of flowers interspersed with long spines;" of the same stature as the last; stem and leaves more

tender; flowers white. July, August. Egypt.
1597. P.

3. E. Ritro. *Small Globe Thistle.* "Head of flowers globular; leaves wing cleft, smooth above, woolly beneath; stems about two feet high, rather woolly;" each branch terminated by a globular head of flowers, smaller than those of the first species, of a deeper blue, but sometimes white. July to September. Europe. 1570. P.

4. E. Strigo'sus. *Annual Globe Thistle.* "Calyxes not in a globular head, but in bundles; lateral flowers barren; leaves with strong bristles above;" stem about two feet high, white; leaves divided, ending in many spiny points, upper side green, lower white and woolly; stems terminated by a single bundle of pale blue flowers. July, August. Spain. 1729. A.

5. E. Lanugino'sus. *Woolly Grecian Globe Thistle.* "Stem shrubby; branches woolly; leaves somewhat doubly pinnate; segments narrow, smooth above;" stem about a foot high, terminated by a middling sized sessile head of blue or white flowers; leaves finely divided, hoary, armed with sharp thorns. Probably a variety only of E. Ritro. June, July. The Levant. 1736.

CLASS XX.

GYNANDRIA.

*Order Monandria.*1. *Orchideæ, with a spur.*

I. ORCHIS. Corolla five petalled; upper petal arched; nectary or lip spurred underneath at the base; anther terminal, adhering.

2. *Orchideæ, without a spur.*

II. OPHRYS. Corolla five petalled, somewhat ringent; petals spreading; nectary or lip from the base of the style, spurless, spreading; anthers terminal, adhering.

III. NEOTTIA. Corolla five petalled, ringent; outer petals connected round the swelling base of the nectary or lip; anther parallel to the acuminate style, inserted on the back.

IV. EPIPACTIS. Corolla five petalled, erect, spreading; nectary or lip spurless; anther lid like, permanent; pollen powdery.

V. ARETHUSA. Corolla five petalled, somewhat ringent; anther lid-like, permanent; nectary or lip tabular, within the bottom of the corolla fastened to the style.

VI. MALAXIS. Corolla five petalled, spreading, reversed; nectary or lip concave, spreading; anther lid-like, deciduous.

VII. CYMBIDIUM. Corolla five petalled, erect or spreading; nectary or lip concave at the base, spurless; anther lid-like, deciduous.

Order Diandria.

VIII. CYPRIPEDIUM. Corolla four petalled, spreading; nectary or lip bellying, inflated; style furnished above with a petal-like lobe.

Order Hexandria.

IX. ARISTOLOCHIA. Calyx none; corolla one petalled, tubular, tongue-shaped, swelling at the base; capsule inferior, six celled, many seeded.



CLASS XX.

GYNANDRIA.

Order Monandria.

I. OR'CHIS, from ὄρχης, a bulb; most of the species having bulbous roots. Nat. ord. Linn. and Juss. Orchideæ. 78 Species.

1. O. Morio. *Meadow Orchis, Female Orchis.* "Lip three lobed; lobes crenate, obtuse, middle one notched; petals ascending, obtuse; horns conical, ascending, shorter than the germ; stem six inches high, leafy;" leaves lanceolate, embracing; flowers six to eight, purple, violet, or flesh-coloured; petals many nerved. May, June. Britain. P.

2. O. Mas'cula. *Early purple Orchis, Male Orchis.* "Lip three lobed, slightly crenate, obtuse, middle lobe two cleft; petals acute, outer one reflected; horn conical, ascending, as long as the germs;" stem a foot high; leaves lanceolate, broadish, spotted with black purple; flowers in a loose spike, numerous, purple, darker or paler, rarely white; petals three nerved. April, May. Britain. P.

3. O. Ustula'ta. *Dwarf Orchis.* "Lip three-parted; segments linear, dotted, rough, middle ones two-parted; petals erect, acute; horn hooked, blunt, short; floral leaves nearly as long as the germ;" stem from four to six inches high, angular; leaves bluntly lanceolate; flowers numerous, in a close short ovate spike, brown purple on the outside; lip white, with purple dots. May, June. England. P.

4. O. Fus'ca. *Brown Orchis.* "Lip three-parted, dotted, rough; lateral segments oblong, middle segment large, crenate, two lobed, with a point between; petals acute, converging; horn straightish, short; floral leaves four times as short as the germ;"

lower leaves ovate, oblong; a little blunt; stem from one to two feet high, green below, purple above; flowers numerous, varying in colour, greenish brown, brownish purple, or ash-coloured. By some authors made a variety only of the next species. May, June. Britain. P.

5. O. Militaris. *Man Orchis, Military Orchis.* "Lip three-parted, dotted, rough; lateral segments linear, middle segment two lobed, with a point between the lobes; petals acute, converging; horn straight, half as long as the germ; floral leaves indistinct;" stem a foot and half high; leaves about four, acutely lanceolate; spike with numerous flowers; petals greenish white, with purple lines; lip of the nectary with purple dots. May, June. England. P.

6. O. Globo'sa. *Round spiked Orchis.* "Lip three parted; middle segment notched; petals pointed at the apex; horn as short again as the germ; spike dense, ovate; leaves lanceolate;" stem a foot or more high, leafy; spike short, very much crowded; flowers frequently reversed, bright purple, with deeper spots on the lip. It is sometimes confounded with the next species. June, July. Austria. 1792. P.

7. O. Pyramidalis. *Pyramidal or late flowering Orchis.* "Lip three-parted, two horned above at the base; segments equal, very entire; horn about as long as the germ; spike dense, oblong;" stem almost covered with leaves; leaves lanceolate, acute, veined;

Flowers very numerous, crowded in a short blunt cone, deep flesh colour, or pale purple, sometimes white. June, July. Britain. P.

8. O. Hircina. *Lizard Orchis.* "Lip three-parted; lateral segments linear, awl-shaped; middle segment lengthened, three times as long as the germ, linear, two cleft; petals converging; horn very short, conical, purse-like;" stem from two to three feet high; flowers dull purple or whitish, with a rank smell; lip spotted; leaves lanceolate. June, July. England. P.

9. O. Bifolia. *Butterfly Orchis.* "Lip very entire, obtuse; horn twice as long as the germ; stem leaves sheathing, very short; root leaves two, oblong, tapering at the base;" stem a foot high; flowers about twelve, in a loose spike, white, fragrant; outer petals spreading; lip lanceolate; spur awl-shaped, very long. May, June. Britain. P.

10. O. Latifolia. *Marsh Orchis.* "Lip slightly three lobed, reflected at the sides; upper petals converging, two lateral ones reflected; horn conical, shorter than the germ; floral leaves longer than the flower;" root palmate or hand-shaped; stem a foot and a half high, hollow; leaves five or six, lanceolate, keeled, sheathing; flowers numerous, in a close spike, rose or flesh-coloured, purple or white. May, June. Britain. P.

11. O. Maculata. *Spotted Palmate Orchis.* "Lip flat, three lobed, crenate; upper petals converging,

lateral ones spreading ;" horn cylindrical, shorter than the germ ; floral leaves as long as the germ ; root palmate, or hand-shaped ; stem solid, from a foot to eighteen inches high ; leaves lanceolate, spotted with black ; flowers numerous, in a close conical spike, pale purple, or whitish, sometimes spotted. June, July. Britain. P.

12. *O. Spectabilis. Showy American Orchis.*
" Lip ovate, undivided, crenate, blunt ; petals straight, lateral ones larger ; horn club-shaped, shorter than the germ ; floral leaves longer than the flower ; stem leafless ;" root leaves two, oval, the length of the plant ; spike of five or six greenish flowers. June, July. North America. 1801. P.

13. *O. Papilionacea. Papilionaceous Orchis.*
" Lip ovate, undivided, toothed, notched ; petals nerved, converging ; horn awl-shaped, shorter than the germ ; floral leaves membranous, coloured, longer than the germ," resembling *O. Militaris* ; lip very large ; flowers purple, marked with lines ; spike few-flowered ; stem six inches high ; it varies with a red flower. June, July. Spain. 1788. P.

14. *O. Conopsea. Red banded or long spurred Orchis.* " Lip obtusely three lobed ; lateral petals very much spreading ; horn awl-shaped, twice as long as the germ ;" root palmate or hand-shaped ; stem a foot and a half high ; flowers in a long loose spike, pale purple, aromatic ; leaves lanceolate, narrow. June, July. Britain. P.

15. O. Ni'gra. *Dark flowered Orchis.* "Lip ovate, acuminate, undivided; petals spreading; horn obtuse, bag-form; spike thick, ovate; leaves linear;" stem about nine inches high; flowers dark purple, of a very sweet scent, sometimes rose-coloured. June, July. Switzerland. 1759. P.

16. O. Vi'ridis. *Green or Frog Orchis.* "Lip linear, three toothed at the apex; petals converging; horn obtuse, purse-like, half as long again as the flower;" stems scarcely a span high; lower leaves ovate, obtuse, upper linear; spike many flowered; petals greenish, with dusky purple tips. June, July. Britain. P.

17. O. Al'bida. *White Orchis.* "Lip three-parted; segments linear, acute, middle one obtuse; petals converging; horn thrice shorter than the germ, obtuse;" stem a span high, leafy; leaves lanceolate, lower ones obtuse; spike thick, many flowered; flowers small, somewhat odorous; petals white, spreading. June, July. Britain. P.

18. O. Fimbria'ta. *Purple fringed Orchis.* "Horn thread-form, longer than the germ; lip three-parted; segments wedge-form, fringed;" stem four cornered; leaves from three to five on the stem, sessile, acute; spike ovate, many flowered; flowers blue purple. July. Canada. 1777. P.

19. O. Cilia'ris. *Yellow fringed Orchis.* "Horn thread-form, longer than the germ; lip lanceolate, pinnate, fringed, as long again as the petals; interior

petals cut, fringed ;" stem leafy, erect, scored ; leaves lanceolate, tapering ; flower of an iron yellow, rarely white. June to July. North America. 1796. : P.

For reasons stated in the Preface of this work, the arrangement of Willdenow, in his last edition of the Species Plantarum of Linnaeus, is preferred to the more recent arrangement of the Kew Catalogue ; the genera of this whole class have been so often shifted, that some small irregularities seem to be a less evil than such endless mutations. No family of plants has excited more attention than the Orchises, both for their beauty and singularity ; they are, however, with difficulty preserved in gardens ; it being rare that the cultivator is enabled to propagate them by seed ; from the dried roots of *O. Mascula*, and perhaps from some other species, is obtained Salep, a wholesome and nutritious article of diet.

II. O'PHRYS, from ὄφρυς, the eye-brow ; one species, we are told by Pliny, being used to blacken the eye-brows. Nat. ord. Linn. and Juss. Orchidæ. 19 Species.

1. *O. Monor'chis*. Yellow, or *Musk Ophrys*. " Flower-stalk naked ; lip three-parted ; segments linear, lateral ones diverging ; floral leaves as long as the germ ;" one bulb of the root remote, stalked, smaller ; stem a hand high ; leaves lanceolate, two from the root and one on the stem ; flowers in a dense spike, numerous, yellowish green, with a faint smell. June, July. England. P.

2. *O. Anthro'phora*. Green Man *Ophrys*. " Lip longer than the germ, linear, three cleft ; mid-

the segment lengthened, two cleft; petals converging; stem leafy," a span high; leaves egg lance-shaped; spike long, many flowered; petals purplish green; lip yellowish. June. England. P.

3. O. Api'fera. *Bee Ophrys or Orchis.* " Lip downy, three lobed; middle lobe obovate, lengthened, half three cleft; terminal segment awl-shaped, recurved; side lobes oblong;" stem leafy, a foot high; leaves alternate, lanceolate, downy; flowers in a spike; three outer petals of the corolla spreading, purple; two inner petals lanceolate, short, greenish; lip brown purple; whole flower bee-like. June, July. England. P.

4. O. Arani'fera. *Spider Ophrys.* " Lip downy, with two smooth lines, three lobed; middle lobe notched, blunt; side lobes short, obtuse;" stem leafy, a span high; leaves ovate, lanceolate, spreading; flowers from three to six, in a thin spike; petals pale green, three outer spreading, obtuse, oblong; two inner lanceolate, acute, shorter; lip brown: a lower plant than the former. April, May. England. P.

5. O. Musci'fera or Myo'des. *Fly Ophrys.* " Lip downy, three-parted; middle segment oblong, two lobed, lengthened; side segments linear, lanceolate; anther obtuse;" stem leafy, a foot high; leaves three or four, lanceolate, pale green; flowers in a thinly scattered spike, fly-like; three outer petals green, lanceolate, obtuse; two inner petals purple, linear,

very short; lip reddish brown, with a blue spot in the centre. May, June. England. P.

This genus is still more curious than the preceding: the resemblance of the flowers to the insects from which they take their name being remarkably striking; and, what is singular, when viewed with a microscope, the likeness is not diminished; they require much the same treatment as the Orchises, and are with the same difficulty preserved for any length of time in gardens.

III. *NEOTTIA*, *morria*, a bird's nest; the roots of one formerly received species being complicated in that form. Nat. ord. Linn. and Juss. Orchideæ. 15 Species.

1. *N. Repens*. *Creeping Neottia*. "Root leaves ovate, stalked, netted; flower-stalk sheathed, downy; flowers in a spike, one rowed, downy; lip and petals lanceolate;" stem a span high, almost leafless; leaves several, chequered with brown purple, in tufts, ovate; flowers flesh-coloured, fragrant; lip inflated. July, August. Scotland. P.

2. *N. Spiralis*. *Spiral Neottia, Ladies' Traces*. "Root leaves oblong, somewhat stalked; spike twisted; flowers one rowed; lip ovate;" stem spiral, about six inches high; leaves several, spreading in a starry form; spike two or three inches long, slender, downy; calyx and petals white; lip with a green rib; flower fragrant. August, September. Britain. P.

IV. *EPIPACTIS*, from *επιπάκτων*, to congeal or grow

together at the summit, the petals approaching towards the upper part. Nat. ord. Linn. and Juss. Orchidace. 14 Species.

* *Lip cloven.*

1. E. Nidus A'vis. *Bird's Nest Epipactis.* "Stem leafless, sheathed; lip inversely heart-shaped, twice as long as the obtuse petals; root parasitical, of numerous juicy fibres;" stem a foot high, with alternate scales; leaves none; flowers numerous, in a dense spike, inodorous, brownish. May, June. Britain. P.

2. E. Ova'ta. *Common Tway Blade.* "Stem two-leaved; leaves ovate, opposite; lip two-cleft, linear, thrice as long as the obtuse petals;" stem a foot high; flowers green, small, numerous, in a spike; lip producing a small drop of honey. May, June. Britain. P.

3. E. Cordata. *Heart-leaved or Least Tway Blade.* "Stem two-leaved; leaves heart-shaped, opposite; lip three cleft, lateral; segments very short, middle segment very long, two parted, linear;" stem not a span high; flowers brownish green, in a spike. June, July. Britain. P.

** *Lip entire.*

4. E. Latifo'lia. *Broad-leaved Epipactis, or Common Helleborine.* "Leaves ovate, stem-clasping; lower floral leaves longer than the flower; flowers pendulous; lip entire, pointed, shorter than the petals; germ downy;" stem nearly two feet high,

roughish ; flowers in a long spike ; petals of a brownish green ; lip purplish. July, August. Britain. P.

5. E. Palus'tris. *Marsh Epipactis, Marsh Helleborine.* "Leaves lanceolate, stem-clasping ; floral leaves shorter than the flower ; flowers pendulous ; lip crenate, obtuse, as long as the petals ; germ downy ;" a lower plant than the former ; flowers fewer, larger, more specious, variegated with white, purple or yellow ; lip crenate. July, August. Britain. P.

6. E. Pal'lens. *White Epipactis, or Great Helleborine.* "Leaves oblong, lanceolate, sessile ; floral leaves longer than the flower ; flowers erect, lip obtuse, shorter than the petals ; germ smooth ;" stem a foot high ; flowers three to eight, closed, large, elegant, white with yellow lines upon the lip. June. Britain. P.

7. E. Ensifo'lia. *Sword-leaved Epipactis, or Helleborine.* "Leaves lanceolate, acuminate, somewhat two rowed ; floral leaves very minute, awl-shaped ; flowers erect ; lip obtuse, twice as short as the petals ; germ smooth ;" stem a foot high ; flowers white. It differs from the last in its minute floral leaves, shorter lip, more slender germ, leaves longer, narrower. June to August. Britain. P.

8. E. Ru'bra. *Purple Epipactis or Helleborine.* "Leaves lanceolate ; floral leaves longer than the germ ; flowers erect ; lip acute, with elevated, veiny, yellow lines ; germ smooth ;" flowers red, purple, elegant ; stem a foot high. June, July. Britain. P.

V. ARETHU'SA, from one of the nymphs of Diana, fabled to be changed into a fountain in Sicily. Nat. ord. Linn. and Juss. Orchideæ. 7 Species.

1. A. Divaricata. *Lily-leaved Helleborine or Arethusa.* "Root somewhat hand-shaped; stem leaf and floral leaf linear, oblong; outer petals linear, lanceolate;" stem two feet high, simple, single flowered, smooth; flower large, handsome, rose-coloured; calyx dull purple. June, July. North America. 1787. P.

VI. MALAX'IS, from μαλαττω, to soften, the plants being of a delicate structure. Nat. ord. Linn. and Juss. Orchideæ. 13 Species.

1. M. Paludo'sa. *Marsh Malaxis.* "Leaves mostly four, rough at the tip; flower-stalk five cornered; lip concave, acute;" stalk scarcely a hand high, nakedish; spike many flowered; flowers yellowish green, reversed. July. England. P.

2. M. Loeselii. *Dwarf Malaxis.* "Leaves two, ovate, lanceolate; flower-stalk three cornered; lip ovate, recurved at the tip;" stalk a hand high; spike few flowered; flowers lemon-coloured. July. England. P.

3. M. Lilifo'lia. *Lily-leaved Malaxis.* "Leaves two, ovate; stalk triangular; petals linear, thread-shaped; lip prominent, obovate, acute; style deflexed, recurved;" stalk twice as tall as the leaves; flowers numerous, in a loose spike; petals whitish; lip olive green. June, July. North America. 1758. P:

VII. CYMBIDIUM, from κυμβίον, a boat, alluding to the shape of the fruit. Nat. ord. Linn. and Juss. Orchidæ. 61 Species.

1. C. Corallorhizon. *Coral-rooted Boat Lip.*
" Flower-stalk sheathed, leafless; flowers stalked; lip oblong, acute; petals lanceolate, two lower ones deflected;" whole plant yellowish green, a span high; spike few flowered; flowers small; lip undivided. June, July. Scotland. P.

Order Diandria.

VIII. CYPRIPE'DIUM, from κυπρίς, Venus, and πεδιόν, a shoe. Nat. ord. Linn. and Juss. Orchidæ. 10 Species.

1. C. Calceolus. *Common Ladies' Slipper.* " Stem leafy; lobe of the style elliptical, obtuse; lip shorter than the petals, compressed;" stem a foot high, one, rarely two flowered; leaves lanceolate, pointed; lip yellow, veined; petals dark purple. May to July. England. P.

2. C. Parviflo'rūm. *Small-flowered Ladies' Slipper.*
" Stem leafy; lobe of the style triangular, acute; tip compressed, shorter than the petals; petals lateral, linear, twisted;" plant minutely pubescent; petals yellow, two larger with red veins; nectary plain yellow, without veins. May, June. North Amer. rica. P.

3. C. Spectabile. *White-petalled Ladies' Slipper.*
" Roots fibrous; stem leaves ovate, lanceolate; petals obtuse;" stem and leaves hairy; petals white, large,

scored; nectary large, rose-coloured. June, July.

North America. 1731. P.

4. C. Hu'mile. *Two-leaved Ladies' Slipper.*

"Roots fibrous; leaves two, oblong, radical;" stem very short; nectary large, rose-coloured; petals dull purple. May, June. North America. 1786. P.

5. C. Arietinum, *Ram's-head Ladies' Slipper.*

"Stem leafy; leaves lanceolate, stem-clasping; corolla of five petals;" stem four to six inches high, downy; leaves commonly four; floral leaf lanceolate, erect; upper petal broad, erect, four others linear, all green, striped with red; nectary white, chequered with red. May. North America. 1808. P.

This is the most magnificent and perhaps admired genus of the Orchis tribe, distinguished from all the rest by being truly diandrous, as well as by its large inflated bladder-like lip or nectary. The plants are preserved in gardens with somewhat less difficulty than those of the other genera, succeeding tolerably well when planted in a mixture of bog earth and loam in a shady situation.

Order Hexandria.

IX. ARISTOLOCHI'A, from ἀριστος, best, and λόχια, to bring forth, it being supposed to assist parturition. Nat. ord. Linn. and Juss. Orchidæ. 39 Species.

1. A. Si'pho. *Broad-leaved Birth Wort.* "Leaves heart-shaped, stalked; flowers solitary, border three-cleft, equal; floral leaf ovate; stem twining, shrubby;" leaves spreading, veined; corolla of a purplish

brown ; tube shaped like a Syphon. June, July.
North America. 1763. S.

2. A. Tomento'sa. *Downy-leaved Birth Wort.*
" Leaves heart-shaped, stalked, downy beneath;
flower-stalks solitary, without floral leaves ; tube of
the corolla bent back, border three-cleft, equal ; mouth
gaping ; stem shrubby, twining ;" border of the co-
rolla yellow, interior part dark purple. June, July.
North America. 1799. S.

3. A. Boë'tica. *Spanish Birth Wort.* " Leaves
heart-shaped, rather acute ; flower-stalks about three,
longer than the leaf stalks ; stem twining ; corolla
incurved ; lip ovate ;" flowers oblong, crooked, dark
purple : an evergreen and odorous plant. May, June.
Spain. 1598. E. P.

4. A. Lon'ga. *Long-rooted Birth Wort.* " Leaves
heart-shaped, stalked, obtuse ; stem weak ; flowers
solitary ; fruit ovate ; corolla erect ; lip lanceolate ;"
root very long ; branches trailing ; flower-stalks at the
axils of the leaves ; flowers pale purple. June to
October. South of Europe. 1548. P.

5. A. Serpenta'ria. *Virginian Birth Wort or
Snake Root.* " Leaves heart-shaped, oblong, flat ;
stems weak, flexuose, round ; flowers solitary ; flower-
stalks radical ;" stem six inches to a foot high ;
flowers blue or purplish, on long stalks ; tube con-
tracted in the middle, globular at the base, spreading
at the extremity. June, July. North America.
1632. P.

6. A. Pistolochi'a. *Small Birth Wort.* "Leaves heart-shaped, a little crenate, netted underneath, stalked; flowers solitary; corolla erect;" stems angular, branching, weak, a foot high; floral leaf heart-shaped at the base of the flower-stalk; flowers small; lip bent inwards; tube yellow; border blood-coloured. June, July. South of Europe. 1596. P.

7. A. Rotun'da. *Round-rooted Birth Wort.* "Leaves heart-shaped, somewhat sessile, obtuse; stem weak; flowers solitary;" roots roundish, sending out weak branches; flowers solitary, close to the leaf stalks, of a purplish black, curved inwards at the lip. A. Pallida seems to be a variety of this, with a pale flower. April to September. South of Europe, 1596. P. Gr. Ho.

8. A. Clemati'tis. *Common Birth Wort.* "Leaves heart-shaped; stem erect; flowers axillary, crowded;" stem two feet high, simple, scored, a little zigzag; leaves alternate; corolla lemon-coloured, with green streaks. May to August. England. P.

Many of the species of Birthwort were formerly admitted into the *Materia Medica*. A. Serpentaria is the only one which now retains its place; it was first recommended as possessing extraordinary virtues in counter-acting the poisonous effect arising from the bite of serpents: it is a very powerful stimulant and sudorific, and has been prescribed with the greatest benefit in various stages of low fever.

CLASS XXI.

MONOECIA.

Order Triandria.

I. **TYPHA.** Male, catkin cylindrical, dense, chaffy; anthers about three on each filament; calyx indistinct; corolla none. Female, catkin cylindrical, below the males; calyx none; corolla none; seed one, on a feathered stalk.

II. **ZEA.** Male, flowers in distinct spikes; calyx a two flowered awnless glume; corolla two awnless valves. Female, calyx a glume of two valves; corolla of four valves; style one, thread-shaped, pendulous; seeds solitary, imbedded in an oblong receptacle.

III. **TRIPSACUM.** Male, calyx a glume of two flowers, the innermost neuter; corolla of two membranous valves. Female, calyx a single flowered glume, enclosed in a single leaved involucre pierced at each side; corolla of two valves; stigmas two; seed one.

IV. **COMPTONIA.** Male, flowers in a catkin; calyx two leaved; corolla none; anthers forked. Female, flowers in a catkin; calyx six leaved; corolla none; styles two; nut oval.

Order Tetrandria.

V. **AUCUBA.** Male, calyx four toothed; corolla four petalled; receptacle with a square hole impressed

upon the middle. Female, calyx four toothed; corolla four petalled; germen inferior; style one, short; nut ovate, one celled.

VI. URTICA. Male, calyx of four leaves; corolla none; nectary central, cup-shaped. Female, calyx two vaived; corolla none; seed one, superior, polished.

VII. MORUS. Male, calyx in four deep segments; corolla none. Female, calyx of four leaves; corolla none; styles two; seed solitary, invested with the pulpy calyx.

VIII. BUXUS. Male, calyx three leaved; petals of the corolla two; rudiment of a germ. Female, calyx four leaved; petals of the corolla three; styles three; capsules three beaked, three celled; seeds two in each cell.

IX. ALNUS. Male, catkin composed of wedge-shaped truncated receptacles, each containing three flowers; corolla four parted; calyx a scale. Female, a catkin; corolla none; calyx scales two flowered; styles two; seeds compressed, ovate, naked.

Order Pentandria.

X. AMBROSIA. Male, common calyx one leaf; corolla of one petal, five-cleft, funnel-shaped; receptacle naked. Female, calyx one leafed, entire, the belly five-toothed, one flowered; corolla none; nut of the hardened calyx one seeded.

XI. AMARANTHUS. Male, calyx three or five leaved; corolla none; stamens three or five. Female, calyx three or five leaved; corolla none; styles three; capsules one celled, opening horizontally; seed one.

XII. SCHISANDRA. Male, calyx of nine leaves in three rows; corolla none; anthers nearly sessile, channelled at the top. Female, calyx as in the male; corolla none; pistils numerous, in heads; berries single seeded, attached to an elongated thread-shaped receptacle.

Order Hexandria.

XIII. ZIZANIA. Male, calyx none; corolla of two valves, the outer one pointed. Female, calyx none; corolla of two unequal closed valves, the outermost largest, revolute at the edges, with a terminal awn; styles two, straddling; seed solitary, inclosed in the plaited corolla.

XIV. COCOS. Male, calyx three leaved; corolla three petalled; stamens six. Female, calyx and corolla as in the male; stigmas three; drupe leathery.

Order Polyandria.

XV. ARUM. Spathe one leaved, cowled; spadix naked above, bearing the stamens in the middle, and the styles below; corolla none; berry one celled.

XVI. SALISBURIA. Male, catkin naked; calyx

and corolla none; anthers tiled. Female, calyx four-cleft; drupe superior, with a triangular nut.

XVII. *THELYGONUM*. Male, calyx in two revolute segments; corolla none; stamens about twelve. Female, calyx lateral, of two leaves; corolla none; style one; capsule leathery, one celled, one seeded.

XVIII. *POTERIUM*. Male, calyx three or four leaved; corolla deeply four-cleft; stamens thirty to fifty. Female, calyx three or four leaved; corolla deeply four-cleft; pistils one or two; nut of two cells, invested with the hardened tube of the corolla.

XIX. *FAGUS*. Male, calyx five-cleft, bell-shaped; corolla none; stamens about twelve. Female, calyx four toothed, bristly; corolla none; germs two; nuts two, included in the leathery prickly calyx.

XX. *CASTANEA*. Male, catkin naked; calyx none; corolla five petalled; stamens ten to twenty. Female, calyx five or six leaved, prickly; corolla none; germs three; stigmas pencil-form; nuts three, inclosed in the prickly calyx.

XXI. *QUERCUS*. Male, calyx bell-shaped, membranous, lobed; corolla none; stamens from five to ten. Female, calyx bell-shaped, leathery, entire, rough; corolla none; style one; stigmas two to five; nut leathery, embraced at the base by the hardened calyx.

XXII. *JUGLANS*. Male, catkin tiled; calyx a scale; corolla six parted; stamens about twenty.

Female, calyx four-cleft, superior; corolla four-cleft; styles two; drupe leathery, with a furrowed kernel.

XXIII. **CORYLUS.** Male, catkin tiled; calyx a three-cleft scale; corolla none; stamens eight. Female, calyx two parted, torn; corolla none; styles two; nut ovate, encircled in the permanent calyx.

XXIV. **CARPINUS.** Male, catkin tiled; calyx a roundish scale; corolla none; stamens eight to twenty. Female, catkin tiled; calyx scale oblong; corolla none; germs two; styles two to each germ; nut angular, one celled.

XXV. **OSTRYA.** Male, catkin tiled; calyx a scale; corolla none; filaments clustered. Female, catkin naked; calyx none; corolla none; capsule inflated, tiled, one seeded at the base.

XXVI. **BETULA.** Male, catkin tiled; calyx one leafed, peltate, three-cleft, three flowered; corolla none; stamens ten to twelve. Female, catkin tiled; calyx and scale two flowered; corolla none; seed one, winged.

XXVII. **PLATANUS.** Male, catkin globose; calyx and corolla indistinct; anthers tiled, growing round the filament. Female, catkin globose; calyx of many leaves; corolla none; stigma recurved; seed club-shaped, downy at the base.

XXVIII. **LIQUIDAMBAR.** Male, catkin conical, surrounded with a four leaved involucre; calyx none; corolla none; filaments numerous. Female, catkin

globose, surrounded with a four leaved involucre; calyx one leaved, pitcher-shaped, two flowered; corolla none; styles two; capsules two, one celled, many seeded, surrounded by the calyx at their base.

Order Monadelphia.

xxix. PINUS. Male, calyx of the catkin a peltate scale; corolla none; stamens several; anthers naked, attached to the scales. Female, calyx of the catkin an unequally two lipped scale; corolla none; cone woody; seeds two, winged at the base of each scale.

xxx. CUPRESSUS. Male, catkin tiled; calyx a scale; corolla none; anthers two or four, sessile, without filaments. Female, catkin becoming hard; calyx a scale; corolla none; stigmas one or two concave points; nut angular.

xxxi. THUJA. Male, catkin tiled; calyx a scale; corolla none; anthers four. Female, catkin becoming hard; calyx a two flowered scale; corolla none; seed surrounded by a membranous wing.

xxxii. ACALYPHA. Male, calyx three or four leaved; corolla none; stamens eight to sixteen. Female, calyx three leaved; corolla none; styles three; capsule three celled; seeds solitary, large.

xxxiii. PHYLLANTHUS. Male, calyx six parted; corolla none; filament columnar; anthers three. Female, calyx in six deep segments; corolla none

nectary a border, with twelve angles; styles three; capsule three lobed, with six elastic valves.

XXXIV. XYLOPHYLLA. Male, calyx in six deep segments, three of them interior; corolla none; nectary of six globose glands. Female, calyx and nectary like the male; styles three; stigmas three-cleft; capsule of three cells, with six elastic valves; seeds two in each cell.

XXXV. CROTON. Male, calyx cylindrieal, five toothed; corolla five petalled; stamens ten to fifteen. Female, calyx many leaved; corolla none; styles three cleft; capsule three celled; seed one.

XXXVI. RICINUS. Male, calyx five-cleft; corolla none; stamens numerous. Female, calyx three-cleft; corolla none; styles three, cloven; capsule three celled; seed solitary.

XXXVII. TRICHOSANTHES. Male, calyx five toothed; corolla in five deep segments, with a branch-ed fringe; filaments three, connate. Female, calyx and corolla as in the male; style three-cleft; berry oblong.

XXXVIII. MOMORDICA. Male, calyx five-cleft; corolla five parted; filaments three, connate. Female, calyx five-cleft; corolla five parted; style three-cleft; berry separating elastically.

XXXIX. CUCUMIS. Male, calyx five-cleft; corolla five parted; filaments three, connate. Female, calyx five toothed; corolla five parted; style three-cleft; berry three-celled; seeds sharp edged, without a border.

XL. CUCURBITA. Male, calyx five toothed; corolla five-cleft; filaments three, connate. Female, calyx five toothed; corolla five-cleft; style three-cleft; berry three celled; seeds with a tumid border.

XLI. SICYOS. Male, calyx five toothed; corolla five parted; filaments three, connate. Female, calyx five toothed; corolla five parted; style three-cleft; berry single seeded.

XLII. BRYONIA. Male, calyx five toothed; corolla five parted; filaments three, connate. Female, calyx five toothed; corolla five parted; style three-cleft; berry somewhat globular, many seeded.

Order Gynandria.

XLIII. ANDRACHNE. Male, calyx five leaved; corolla five petalled; stamens five, inserted into the rudiment of a style. Female, calyx five leaved; corolla none; styles three; capsule three celled, two seeded.



CLASS XXI.

MONOECIA.

Order Triandria.

I. TY'PHA, $\tau\eta\phi\sigma$, a marsh, from its growing in boggy places. Nat. ord. *Linn.* Calamariæ. *Juss.* Aroideæ. 4 Species.

I. *T. Latifolia*. *Great Cat's Tail, or Reed Mat.* “Leaves linear, flat, slightly convex beneath; male and female catkins close together; stems six feet high, solid, simple;” catkin very large, feeling like plush or velvet, upper part with male flowers, yellow; lower part with female flowers, brown; flowers crowded, innumerable. This species is sometimes cultivated at the edges of ponds; it is often represented by foreign painters in aquatic scenes, indeed Moses in the Bull Rushes is seldom seen without it, whence a vulgar error has arisen, of confounding it with the common Bull Rush, a very different plant.
July. Britain. P.

II. *ZK'A*, from the Greek *ζεία*, which appears to have been some sort of wheat, agreeing with this genus only as being a grain fit for food. Nat. ord. *Linn.* and *Juss.* Gramina. 2 Species.

1. *Z. Mays*. *Indian Corn, or Maize.* “Leaves entire;” stem erect, somewhat branched, jointed, leafy, from five to ten feet high; leaves sheathing, lanceolate, concave, acute, ribbed, two or three feet long; male flowers in numerous aggregate terminal spikes, three or four inches long, greyish, with purple anthers; female flowers below in cylindrical spikes, covered by the large sheaths of the upper leaves; styles six or eight inches long, hanging down; seeds white, yellow, red, or purplish, forming a cone-like

heavy spike. This grain is inferior to wheat as bread corn, but is much used in the West Indies for that purpose, as well as making excellent fodder for cattle. June, July. America. 1562. A.

III. TRIP'SACUM, from τριψις, a rubbing, probably in allusion to the grain being useful for making flour. Nat. ord. Linn. and Juss. Gramina. 4 Species.

1. T. Dactyloides. *Rough-seeded Tripsacum.* " Spikes aggregate, about three together, male in the upper part, female in the base;" stems numerous, erect, reedy, four or five feet high, tinged with purple, knotty, leafy below; leaves long, linear; spikes a span long, smooth; male flowers very numerous. August. Virginia. 1640. P.

IV. COMPTO'NIA, in honour of Dr. Henry Compton, Bishop of London, died 1713, who cultivated many exotic plants at Fulham. Nat. ord. Linn. and Juss. Amentaceæ. 1 Species.

1. C. Asplenifo'lia. *Fern-leaved Comptonia.* Stems three feet high, shrubby, slender, hairy, branched; leaves three or four inches long, alternately indented to the mid-rib, dark green, hairy beneath, sessile; male catkins lateral, erect; nut bony, smooth, of a bay colour, containing one pale seed. March to May. North America. 1714. S.

Order Tetrandria.

v. **AUCU'BA**, derivation not known. Nat. ord. *Linn.* not arranged. *Juss.* *Rhamni.* 1 Species.

1. **A. Japo'nica.** *Blotch-leaved Aucuba.* In its native country a large tree; branches and subdivisions forked, smooth, erect, leaves aggregate at the tops of the branches, opposite, oblong, sharp, remotely serrate; flowers small, purplish, terminal, panicled; leaf-stalks and flower-stalks woolly. It varies with brownish green unspotted leaves, and bright green leaves blotched with white. May to July. Japan. 1783.

vi. **URTI'CA**, from *uro*, to burn or sting. Nat. ord. *Linn.* *Scabridæ.* *Juss.* *Urticæ.* 69 Species.

1. **U. Piluli'fera.** *Roman Nettle.* "Leaves opposite, ovate, or somewhat heart-shaped, deeply serrate; heads of flowers globose;" stem branched, bushy, armed in every part with venomous stings; leaves stalked, varying from lance-shaped to broad ovate; flowers pale green, on axillary twin stalks, one panicled, bearing the male blossom, the other headed, with only female flowers, turning to a very prickly stinging ball. June to August. England. A.

2. **U. Canna'bina.** *Hemp-leaved Nettle.* "Leaves opposite, in three deep wing-cleft segments; clusters cylindrical, in pairs, erect;" stem five or six feet high, the foliage much resembling hemp; leaves deep

E. S. green; clusters thick, an inch and a half long; stem and leaf-stalks armed with large stings; flowers and seeds large. July to September. Siberia. 1749. P.

3. U. Canaden'sis. *Canada Nettle.* "Leaves alternate, ovate, somewhat hairy, serrate; stipules obtuse; clusters axillary, compound, spreading, shorter than the leaves; the lower ones male, sessile, upper female, stalked;" stems four or five feet high; leaves three or four inches long; flowers in axillary branching catkins. August to October. Canada. 1656. P.

4. U. Ni'vea. *Chinese White-leaved Nettle.* "Leaves alternate, roundish, ovate, pointed, toothed, three ribbed, snow white, downy beneath; clusters axillary, repeatedly compound; flowers in bundles;" stem shrubby, erect, three feet high; leaves three to six inches long, upper surface dark green, the other of a brilliant white; flowers in numerous, small, round heads. August, September. China. 1739. P. Gr. Ho.

The race of Nettles, it is said, is more difficult to destroy than to raise; from the stems of some of the species a cordage may be manufactured more durable and strong than that made from hemp: the above described, from the singularity of their manner of flowering, are not uninteresting when planted in large borders.

VII. Mo'RUS, either from μαρπος, black, or from μωρος, foolish, by an antiphrase, it being reputed the

wisest of trees, never budding till the cold weather is certainly past. Nat. ord. Linn. Scabridæ. Juss. Urticæ. 9 Species.

1. M. Al'ba. *White Mulberry Tree.* "Leaves obliquely ovate, somewhat heart-shaped, nearly smooth;" a tree of rather humble growth; bark whitish; copiously and irregularly branched; leaves alternate; flowers green, in shortish spikes; fruit nearly white, insipid, sweetish. June. China. 1598. T.

2. M. Ni'gra. *Common Mulberry Tree.* "Leaves broad, heart-shaped, unequally serrate, somewhat lobed, rough;" a larger tree than the former; leaves rougher, more coarsely and unequally serrate; spikes of flowers longer and larger; fruit dark purple. June. Italy. 1548. T.

3. M. Ru'bra. *Red American Mulberry Tree.* "Leaves ovate, tapering, finely serrate, heart-shaped at the base, downy beneath, sometimes deeply lobed; spikes long and cylindrical;" a large tree, not at all common; fruit long, red, pleasantly tasted. June, July. North America. 1629. T.

Of this valuable genus, the first species is preferred for the sake of its leaves, as food for silk-worms, and is generally cultivated for that purpose throughout the south of Europe. A coarse sort of paper may be made from the bark. The second sort is esteemed for its agreeable and wholesome fruit. Fustick, well known to dyers, as affording an excellent yellow dye, is the wood of M. Tinctoria, a native of Campeachy.

VIII. *Bux'us*, corrupted from *busos*, thick, on account of the density of the wood. Nat. ord. Linn. Tricoccæ. Juss. Euphorbiæ. 2 Species.

1. *B. Sempervirens*. *Common Box Tree*. "Leaves ovate; leaf-stalks somewhat hairy at the margin; anthers ovate, arrow-shaped;" a shrubby tree, twelve to fifteen feet high; stem twisted, branched; leaves opposite, permanent, shining, reddish in winter; flowers in small bunches, small, herbaceous. Var. 1. with leaves lanceolate. 2. *Dwarf Box*, leaves roundish; a low under shrub. April. England. E. T.
2. *B. Balearica*. *Minorca Box Tree*. "Leaves oblong; leaf-stalks smooth; anthers linear, arrow-shaped;" a tree with straight branches, four cornered; leaves opposite, on short foot-stalks, entire, smooth, shining, leathery; flowers in large bunches; a plant somewhat tender. July. Minorca. 1780. E. T.

The wood of the Box Tree is of a close compact grain, not liable to warp, very hard and heavy; it is used in engraving and turning, for making mathematical instruments, combs, flutes, and various other articles. The tree was much admired by our ancestors, on account of its being easily clipped into the shape of animals and other fantastic appearances; it was in equal request with the Romans, for the same purposes; these extravagances have, however, given way to a juster taste, and the box is still cultivated as a beautiful evergreen. Dwarf Box forms the most esteemed edging for separating the beds from the walks in flower-gardens.

IX. AL'NUS, *ab amore alatur*; because flourishing in moist situations. Nat. ord. Linn. and Juss. Ameni-taceæ. 5 Species.

1. A. Glutino'sa. *Common Alder.* "Leaves roundish, wedge-shaped, obtuse, glutinous; axils of the veins woolly beneath;" generally appearing as a shrub, but growing sometimes thirty feet high; wood red and brittle; leaves dark green, crenate, smooth, viscid; leaf-stalks grooved above, with blunt lanceolate stipules at the base; male catkins cylindrical, appearing in Autumn, and continuing to the Spring; the female catkins of a short conical form, like a small fir-cone. Var. with leaves wing cleft, segments acute. March, April. Britain. T.

2. A. Oblonga'ta. *Turkey Alder.* "Leaves elliptic, bluish, glutinous; axils of the veins naked beneath;" leaves longer, narrower, not so rough or glutinous as in the last; they are also thinner. July. South of Europe. 1780. T.

3. A. Inca'na. *Hoary-leaved Alder.* "Leaves oblong, acute, downy beneath; axils of the veins naked; stipules lanceolate;" commonly shrubby; trunk the size of the human arm; branches and twigs even, hoary; leaves unequally serrate; male catkins sessile, female catkins stalked. Its varieties are, 1. The glaucous-leaved, with red leaf-stalks, leaves glaucous beneath; 2. The elm-leaved, leaves green beneath, with green leaf-stalks. June. Europe. 1780. T.

4. A. Serrula'ta. *Notch-leaved Alder.* "Leaves

ovate, acuminate; veins and axils of the veins hairy beneath; stipules elliptic, obtuse;" flower-stalks branched; an ornamental tree. June. North America. 1769. T.

5. A. *Undula'ta*. *Curl-leaved Alder.* "Leaves oblong, acute, rounded at the base, somewhat waved; leaf-stalks and veins hairy beneath; axils of the veins naked; stipules ovate, oblong;" flower-stalks branched. May, June. North America. 1782. T.

The Common Alder delights in a very moist soil; its wood is valuable for piles, pumps, and for all works intended to be constantly under water; it serves also for many domestic and rural uses, as for cart wheels, milk vessels, bowls, trenchers, handles of tools, pattens, and wooden heels.

Order Pentandria.

X. AMBRO'SIA, from a privative, and Σπόρος, mortal; denoting an immortal food. Nat. ord. Linn. Compositæ. Juss. Corymbiferæ. 9 Species.

1. A. *Tri'fida*. *Three-cleft-leaved Ambrosia.* "Leaves three lobed, serrate;" stems eight or ten feet high, branched; flowers not more conspicuous than those of Hemp; lower leaves five lobed. July to September. North America. 1699. A.

2. A. *Ela'tior*. *Tall Ambrosia.* "Leaves twice wing cleft, smoothish; leaf-stalks with a long fringe; clusters terminal, panicled, smooth; stem twiggy," two or three feet high, branched; male flowers more numerous, nodding; female flowers fewer, sessile,

from three to six, aggregate : a plant with the appearance and taste of Wormwood. July, August. North America. 1696. A.

3. A. Artemisifo'lia. *Mugwort-leaved Ambrosia.* "Leaves twice wing cleft, hoary beneath, upper wing-cleft, clusters in three terminal branches ; level-topped ;" stem much branched ; first leaves at the origin of the branches quite entire ; spikes of flowers axillary. July, August. North America. 1759. A.

4. A. Maritima. *Sea Ambrosia.* "Leaves twice wing cleft, obtuse, hoary beneath ; clusters terminal, solitary ; stem straddling ; branches woolly ;" stem about two feet high, hairy ; spikes of flowers axillary ; leaves soft, downy ; the leaves when handled emit a strong odour. July, August. The Levant. 1570. A.

These plants possessing but little beauty, are not commonly cultivated ; but ill according with their splendid denomination.

XI. AMARANTHUS, *αμαράντης*, not decaying. Nat. ord. Linn. *Miscellaneæ. Juss. Amaranthi.* 34 Species.

Flowers with three stamens.

1. A. Greci'ans. *Pellitory-leaved Amaranthus.* "Heads of flowers small, globular, triandrous ; flowers three cleft ; leaves obovate, notched ; stem smooth, branching ;" a span high, whitish, at the base purplish ; leaves smooth, green, marked with lines ; heads

of flowers in pairs, four or five flowered; calyx of three awl-shaped leaves. July to September. North America. 1759. A.

2. A. Melancho'licus. *Melancholy Amaranth.* "Heads of flowers triandrous, axillary, stalked, roundish: leaves ovate, lanceolate, coloured;" stem upright, a span high, dark purple; leaves blunt, wrinkled, waved, with a short white point; lower ones red, liver-coloured on the upper side, bright purple on the lower, with elevated veins; calyx five-leaved; the two colours setting off each other to advantage. June to September. East Indies. 1731. A.

3. A. Tri'color. *Three-leaved Amaranth.* "Heads of flowers triandrous, sessile; leaves oblong, lanceolate, coloured;" stem one to two feet high; leaves blue with a red point, smooth, waved, the younger leaves red, with yellow tips, the older scarlet at the base, violet in the middle, green at the end; leaf-stalks very long, bordered; heads of flowers green; calyxes three leaved; leaves varying, set closely from the top to the bottom of the stem. June to September. East Indies. 1548. A.

4. A. Vi'ridis. *Green Amaranth.* "Heads of flowers axillary, in pairs, triandrous; male flowers three leaved; leaves elliptic, notched, waved at the margin," on long stalks, bright green, but in the shade dusky, heads axillary; calyx of the male flower three leaved, of the female five leaved; floral leaves not surrounding the flower, but scattered along the

lengthened receptacle. August, September. Brazil.
1739. A.

Flowers with five stamens.

5. A. Hy'bridus. *Clustered Amaranth.* "Clusters pentandrous, compound, crowded, erect; leaves ovate, lanceolate;" stem two feet high or more, green or red, upright, smooth, scored; leaves green, with the edges red; calyxes five leaved. It varies, 1. wholly green; 2. with a red stalk; 3. clusters reddish, the rest green; 4. clusters deep red. June to September. Virginia. 1656. A.

6. A. Sanguineus. *Spreading or Bloody Amaranth.* "Clusters pentandrous, more than doubly compound, erect; branches spreading, smooth;" leaves oblong, acute; stem upright, four feet high, firm, red, round, streaked; leaves boat-form, upper surface a mixture of red and green, the under more or less purple; spikes short, swelling in the middle. July to September. The Bahama Isles. 1755. A.

7. A. Hypochondri'acus. *Prince's Feather, or Amaranth.* "Clusters pentandrous, compound, crowded, erect; leaves oblong, lanceolate, dagger-pointed;" stem erect, a foot and a half high, smooth, except under the leaves, reddish, streaked; leaves red and green, acute, veined; clusters naked, red, lateral, short, placed about the stem without order; it varies with leaves and flowers paler. Perhaps it is only a variety of A. Hybridum, and distinguished with difficulty from it by its leaves being shorter at

the end, their base running far down into the leaf-stalk; clusters redder. July to September. Virginia.

1684. A.

8. A. Cauda'tus. *Pendulous Amaranth, Love lies Bleeding.* "Clusters pentandrous, compound, pendulous; leaves ovate, lanceolate; stem nodding," about two feet high, green, obscurely angular, scored, slightly hairy at top; leaves stalked, smooth, blunt, with a transparent point; clusters terminal, very long, cylindrical, deep purple; flowers crowded; calyxes five leaved. Var. 1. Tree Amaranth, stem six or eight feet high; spikes much shorter and thicker. August, September. East Indies. 1596. A.

These are the species of this numerous genus which have been the longest cultivated; several others have at times been introduced, for the purpose of being used as culinary esculents, but being more tender in growth, and inferior in flavour to Spinach, they have gradually disappeared. The third and the last species are plants of much beauty and elegance.

xii. SCHISAN'DRA, σχιστις, a fissure, and ἄνθη, male; because the anthers are separated by fissures in the receptacle of the flower. Nat. ord. Linn. Sarmen-taceæ. Juss. Menisperma. 1. Species.

1. S. Coccinea. *Scarlet flowered Schisandra.* A climbing shrub; stem smooth, slender; leaves stalked, alternate, ovate, pointed, wavy, smooth, glaucous beneath; flowers axillary, solitary, stalked, drooping;

internal leaves of the calyx of a fine scarlet ; flower half an inch in diameter. June, July. North America. 1808. S.

Order Hexandria.

XIII. ZIZA'NIA, from ζιζανίον, which Greek word has been interpreted tares ; it is applied by Linnæus to the present genus, which yields an inferior sort of grain, used by the inhabitants in some parts of North America. Nat. ord. Linn. and Juss. Gramineæ. 6 Species.

1. Z. Aquat'ica. *Canada Rice.* "Panicle pyramidal, compound, diffuse, with numerous male flowers in the lower part, spiked, and with female flowers above ;" stems several, two or three feet high ; leaves grassy ; stipules short ; panicle two feet or more in length. This plant in America is called Tuscarora ; its seeds make an excellent pudding, equal to Rice or Millet. It grows in water, and it is thought might be introduced into the bogs of Ireland with success. July to September. North America. 1790. A.

XIV. Co'cos. The fruit is called by the Spanish Coco, a hobgoblin ; from the three holes at the end of the shell giving it the appearance of a monkey's head. Nat. ord. Linn. and Juss. Palmæ. 6 Species.

1. C. Nuci'fera. *Cocoa Nut Tree.* "Unarmed, leaves pinnate ; leaflets folded back, sword-shaped ;" trunk from forty to sixty feet high ; leaves ten or

twelve, forming a terminal head, upper ones erect, middle ones horizontal, lower drooping, from ten to fifteen feet long; flowers yellowish, in a branched panicle; fruit as large as a child's head, clustered, egg-shaped, obscurely three-sided; external rind thin, inner rind extremely fibrous; shell bony, with three holes at the base; the kernel adheres all round the inner side of the shell, and the cavity is filled with a milky liquor: it has not flowered here. East Indies.

1690. E. T. Hot Ho.

The Cocoa Nut Tree is rarely raised to any considerable height in our stoves: in drawings of tropical regions it forms a conspicuous figure. It is celebrated for its extensive utility: its trunk is made into rafters and boats; the leaves are employed for thatching and matting; the fibrous husks for cordage; the shell is formed into goblets; the kernels, pressed in a mill, yield an oil equal to that of Sweet Almonds; the sap makes palm wine, or distilled becomes a spirituous liquor, called Toddy, or Arrack.

Order Polyandria.

xv. A'RUM, from $\alpha\rho\alpha$, injury; on account of the noxious quality of the root. Nat. ord. Linn. Piperritæ. Juss. Aroideæ. 27 Species.

* Leaves compound.

1. A. Dracunculus. *Long-sheathed Arum, Common Dragon.* "Leaves pedate, entire; spadix cylindrical; sheath ovate, longer than the spadix;" flower-stalk about three feet high, spotted like the belly of a

snake; sheath very long, dark purple; spadix of the same colour; the whole flower with a strong scent of carrion. June, July. South of Europe. 1548. P.

2. A. Dracon'tium. *Short-sheathed Arum, Green Dragon.* "Leaves pedate, entire, longer than the sheath; sheath shorter than the spadix;" flower-stalk a span high; leaves upright; leaflets commonly in threes; spadix awl-shaped, slender, longer than both sheath and leaves. June. North America. 1759. P.

3. A. Triphyl'lum. *Three-leaved green stalked Arum.* "Stemless; leaves ternate, entire; spadix club-shaped, shorter than the ovate, acuminate, spreading sheath;" some flower-stalks bear male, others female flowers, from the same root; sheath streaked with purple. A. Atro-rubens, purple stalked Arum, is perhaps only a variety of this. May, June. North America. 1664. P.

* *Leaves simple.*

4. A. Macula'tum. *Common Arum, Cuckow Pint, Wake Robin.* "Leaves halbert arrow-shaped; lobes bent back; spadix club-shaped, shorter than the sheath;" leaves radical, two to four, shining, veiny, frequently marked with dark spots; sheath green; spadix varying from yellowish green to purple; berries scarlet. A. Italicum seems to be a larger variety, with leaves veined with white. May to July. Britain. P.

5. A. Ari'sarum. *Hooded Arum, or Friar's Cowl.*

"Leaves halbert arrow-shaped, dagger-pointed; lobes bent back, oblong, obtuse; spadix cylindrical, curved, shorter than the cowled sheath;" flower-stalk a foot and a half high; leaves sharpish, longer than the sheath; berries red, one seeded. The Italians call this flower *il lume*, from the striking resemblance of its flower when reversed to a lamp with its wick. April, May. South of Europe. 1596. P. Gr. Ho.

6. A. *Tenuifo'lium*. *Grass-leaved Arum*. "Leaves linear, lanceolate; spadix awl-shaped, longer than the lanceolate sheath;" stemless; leaves five or six; sheath long, pointed, reflexed, white; spadix seven inches long, purple, or greenish, pointed. April, May. South of Europe. 1570. P.

The structure of the flowers in this genus is extremely singular, and on this account it has been a dispute among the most eminent botanists in what class it ought to be placed. Linnaeus left it, as well as its near neighbour *Calla*, in the class Gynandria, but with some doubts of the propriety of placing it there; this latter genus most persons, at first sight, would suspect to be an Arum, but its berries are many seeded. In several species of Arum, the root, though highly acrimonious, yet when baked becomes palatable and nutritious. The fresh root of our native species has been employed in medicine as a stimulant.

xvi. SALISBU'RIA, named by Sir J. E. Smith, in honour of Richard Anthony Salisbury, Esq. an acute

and learned botanist of the present day. Nat. ord. Linn. and Juss. Coniferae. 1 Species.

1. S. Adiantifolia. *Maiden Hair Tree.* A tree with a lofty straight stem; bark grey; leaves of a fern-like aspect, alternate, stalked, wedge-shaped, abrupt, cloven, smooth, shining; male catkins stalked, yellowish; drupe nearly globose, yellowish, with an austere, white pulp; nut white, longer than the Pistacia. The male flowers only have been seen in England. This plant was formerly called Ginkgo. April, May. Japan. 1764. T.

XVII. THELY'GONUM, from θηλη, female, and γόνος, a knee; because, says Linnaeus, surely without foundation, its swelled joints resemble the knees of a woman. Nat. ord. Linn. Scabridæ. Juss. Urticæ. 1 Species.

1. T. Cynoeram'be. *Purslane Thelygonum, Dog's Cabbage.* Stems several, spreading, a span long, leafy, smooth, purplish; leaves alternate, stalked, each with an axillary tuft of smaller ones, ovate, succulent, shining; foot-stalks as long as the leaves; flowers small, whitish, from the axils of the upper leaves; general aspect of the plant like Parietaria or Mercurialis, our English Dog's Mercury, a common weed in waste places. July. South of Europe. 1710. A.

XVIII. POTE'R'IUM, from ποτήριος, a cup, being one

of the herbs which form the composition called a cool tankard. Nat. ord. Linn. Miscellaneæ. Juss. Rosaceæ. 6 Species.

1. P. Sanguisor'ba. *Common Burnet.* "Spines none; stem herbaceous, somewhat angular;" branches leafy, many flowered, reddish; leaves pinnate; heads of flowers stalked, terminal, solitary; calyx and corolla greenish; stamens like a tassel of purple silk; leaves possessing somewhat the flavour of Cucumber. July. England. P.

2. P. Hy'bridum. *Sweet Burnet.* "Spines none; stem cylindrical, straight," two feet high, with a leaf at each joint; leaves pinnate; leaflets three or four pair, deeply indented, of an agreeable scent; flowers in small roundish spikes; whole plant woolly, ash-coloured. June, July. Italy. 1683. B.

The young leaves of Common Burnet are sometimes used in salads. It has been cultivated as affording fodder for cattle early in the spring, but not answering the farmer's expectations, it is now in a great degree laid aside.

XIX. FA'GUS, from φαγειν, to eat; the fruit or mast having been common food in the early ages of the world. Nat. ord. Linn. and Juss. Amentaceæ. 3 Species.

1. F. Sylva'tica. *Beech Tree.* "Leaves ovate, smooth, indistinctly toothed, fringed at the margin;" a large tall tree; bark whitish; leaves alternate,

spreading, about two inches long, wavy rather than serrate, shining; flowers in ovate, stalked, hairy heads; males lateral; females terminal; nuts with sharp dilated angles; prickles simple, pliant; leaves sometimes with yellow or white stripes. Var. 1. F. *Purpurea*, with leaves dark purple, native of Germany. April, May. Britain. T.

2. F. *Ferruginea*. *American Beech*. "Leaves ovate, pointed, downy beneath, widely serrate, fringed at the margin;" broader, much more distinctly serrate than in the last; fruit smaller, tawny. May, June. North America. 1766. T.

The Common Beech is a very noble and lofty tree, with a thick trunk, and spreading roots. In the woods there is a sort with a rougher bark, which the woodmen call Hay Beech. The wood is brittle, soon decays in the air, but endures under water: it is formed into tool handles, planes, chairs, and bedsteads; split into thin layers it is used to make scabbards for swords, hat cases, &c. it is excellent fuel, and when burnt affords a large quantity of pot-ash: baskets for strawberries are made of the bark: the nuts or mast fatten swine. If the soil be tolerably good, Beech will become fit to be felled in about twenty-five years.

xx. *CASTA'NEA*, from *Kastane*, a town in Thessaly, the neighbourhood of which abounded in these trees. Nat. ord. *Linn.* and *Juss.* Amentaceæ. 2 Species.

1. C. *Ves'ca*. *Common Chestnut Tree*. "Leaves

oblong, lanceolate, acuminate, pointed, serrate, naked beneath;" a large tree; bark with deep fissures; leaves alternate, stalked, six or eight inches long, veiny, smooth, shining, with numerous sharp shallow serratures; flowers on long pendulous spikes, yellowish; the males unpleasantly scented; prickles of the fruit compound and entangled. May, June. England. T.

2. C. Pu'mila. *Chinguapine, Dwarf Chesnut Tree.* "Leaves oblong, acute, dagger-pointed, serrate, woolly white beneath;" prickles of the fruit simple and straight; a tree about fourteen feet high, distinguished by the white bark of its leaves; the nuts are eatable. July. North America. 1699. T.

Common Chesnut is one of the largest and most long-lived of European trees, enduring a thousand years. The nuts produced in England are much smaller than those of Spain and Italy, where they are used as a substitute for flour. The wood is applicable to the same purposes as Oak; the foliage is umbrageous, rich, and beautiful; nothing, however, will thrive under it. In the landscapes of Salvator Rosa, Chesnut Trees are very conspicuous, but most painters prefer the oak for beauty.

xxi. QUERCUS, of uncertain etymology, perhaps from *κερκύος*, hard, rough; some authors give a Celtic derivation. Nat. ord. Linn. and Juss. Amentaceæ. 76 Species.

* *Adult leaves undivided and entire.*

1. Q. Phel'los. *Willow-leaved Oak Tree.* "Leaves deciduous, membranous, linear, lanceolate, tapering at each end, entire, smooth, with a small point; nut roundish;" height fifty feet; bark smooth; leaves scattered, on short stalks, four or five inches long, willow-like; acorns in pairs. May, June. North America. 1723. T.

2. Q. Vi'rens. *Live Oak Tree.* "Leaves evergreen, leathery, elliptic, oblong, revolute, entire, pointless, obtuse at the base, clothed with starry down beneath; fruit stalked; nut oblong;" a tree not common; height forty to fifty feet; leaves two inches long; stamens four or five; cup tessellated, but not rugged. May. North America. 1739. E. T.

** *Leaves more or less toothed, or serrate.*

3. Q. Gramun'tia. *Holly-leaved Oak Tree.* "Leaves roundish, elliptic, nearly sessile, waved, with deep spinous straddling teeth, densely downy beneath, somewhat heart-shaped at the base;" a small straggling tree, with numerous round grey branches, downy when young; leaves evergreen, scarcely an inch long. June. South of Europe. 1730. E. T.

4. Q. I'lex. *Evergreen Oak.* "Leaves ovate, oblong, acute, leathery, entire or serrate, hoary beneath; bark even; nut ovate;" a large bushy evergreen tree; leaves dark green, convex; foot-stalks

downy; acorns two on an axillary downy stalk; cup scaly, downy; leaves varying, entire, serrate, or with sharp pointed teeth. May, June. South of Europe.

1581. E. T.

5. Q. Su'ber. *Cork Tree.* "Leaves ovate, oblong, bluntnish, leathery, entire or sharply serrate, downy beneath; bark cracked, fungous," thick, spungy, yielding the well known substance called Cork; leaves varying in breadth, continuing till Spring; acorns very like those of the Common Oak; a tree of a tufted stumpy appearance. June. South of Europe.

1699. E. T.

6. Q. Coccifera. *Kermes Oak.* "Leaves. elliptic, oblong, rigid, smooth on both sides, with spreading, bristly, spinous teeth; nut ovate; calyx with spreading pointed scales;" a bushy evergreen shrub, producing the kermes, an insect of the genus *Coccus*, which sticks to the branches in the form of little red balls, the size of a pea; it is now out of use with the dyers, being superseded by Cochineal, and used only by French apothecaries. May. South of Europe. 1683. E. T.

7. Q. Prinus. *Chesnut-leaved Oak Tree.* "Leaves on longish stalks, obovate, acute, somewhat downy beneath, with nearly equal dilated callous-tipped tooth-like serratures; calyx of the fruit contracted at the base; nut ovate;" a very large tall tree; leaves six inches in length; much resembling those of the Common Chesnut Tree; bark grey, scaly; acorns

very large; cups short. May, June. North America. 1730. T.

*** *Leaves lobed at the end.*

8. Q. *Aqua'tica*. *Water Oak*. "Leaves wedge-shaped, smooth, tapering at the base, dilated and obscurely three lobed at the end, the middle lobe largest; calyx nearly hemispherical; nut roundish;" a tree forty feet high, but little known in England; its leaves very various, 1. wedge-shaped, lobed at top; 2. wedge-shaped, oblong, acutely indented; 3. wedge-shaped, indistinctly indented, somewhat waved; 4. wedge-shaped, oblong, nearly entire; 5. oblong, lance-shaped, slightly indented; acorns short, roundish; cup shallow. May. North America. 1723. T.

9. Q. *Ni'gra*. *Black Oak Tree*. "Leaves wedge-shaped, somewhat heart-shaped at the base; dilated, abrupt, slightly three lobed at the end, middle lobe shortest, smooth above, rusty beneath; calyx hemispherical, with membranous scales; nut roundish, ovate;" a tree of low growth; bark dark green; leaves twice the size of the last species. May. North America. 1739. T.

**** *Leaves sinuate, with pointed lobes.*

10. Q. *Tincto'ria*. *Dyer's Oak, or Quercitron*. "Leaves downy beneath, ovate, oblong, dilated, widely sinuate; lobes short, obtuse, slightly toothed,

bristle-pointed; calyx of the fruit flat underneath, erect, globose;" a large tree; in America eighty feet high; leaves a span long, and nearly as wide; acorns almost sessile; the bark is admirable for tanning: bruised and powdered it is much used in France for procuring a yellow dye. May. North America. 1800. T.

11. Q. Ru'bra. *Mountain Red Oak.* "Leaves smooth, oblong, sinuate, on long stalks; lobes acute, sharply toothed, bristle-pointed; calyx of the fruit flat underneath; nut ovate;" a large and handsome tree; in America ninety feet high; leaves four or five inches long, on foot-stalks half the length, turning of a deep red in autumn; acorns rather large. May. North America. 1739. T.

12. Q. Coccinea. *Scarlet Oak.* "Leaves smooth, oblong, deeply and widely sinuate, on long stalks; lobes straddling, acute, sharply toothed, bristle-pointed; calyx of the fruit top-shaped, half as long as the nut;" a tree nearly equal in size to the last; leaves longer, with deeper, more rounded sinuses; lobes more distant; acorns half covered by the cup; foliage turning of a bright red in Autumn. May. North America. 1691. T.

13. Q. Ægilops. *Great prickly cupped Oak, or Velanida Tree.* "Leaves ovate, oblong, with bristle-pointed tooth-like lobes, hoary beneath; calyx of the fruit very large, hemispherical, with lanceolate long-spreading scales;" a tree the height of the Common

Oak; branches spreading, covered with a grey bark, with brown spots; leaves stalked, bright green; acorns large, short, a little hollow at the top, almost covered by the cups, which are used for dyeing. May. The Levant. 1731. T.

***** *Leaves sinuate, with blunt lobes.*

14. Q. Al'ba. *White Oak Tree.* "Leaves oblong, deeply wing cleft, glaucous beneath; lobes linear, oblong, obtuse, entire, dilated upwards; fruit stalk-ed; calyx depressed, warty;" a very large tree; bark greyish; leaves a span long, bright green; leaf-stalks stout: the wood of this tree is in the most general use throughout America, for building ships and houses. May. North America. 1724. T.

15. Q. Es'culus. *Italian or Small prickly cupped Oak Tree.* "Leaves ovate, oblong, sinuate, smooth, paler beneath; segments blunish, somewhat angular at the base; fruit nearly sessile; calyx scaly, hemispherical;" a large tree; branches covered with a purple bark when young; acorns long and slender; cups rough, a little prickly; acorns sweet and eatable: brought to table roasted by the rustic Italians. This species is the Esculus of the Georgics, though often translated by the word Beech Tree. May. South of Europe. 1739. T.

16. Q. Ro'bur. *Common British Oak.* "Leaves deciduous, oblong, smooth, dilated upwards, sinuses rather acute; lobes obtuse; fruit-stalks lengthened;

"nut oblong;" a large and lofty tree; branches widely spreading; bark brown, rugged; leaves alternate, with short or scarcely any foot-stalks; clusters of flowers axillary, the male ones lax, pendulous, many flowered, yellow; female on stalks, one or two inches long, composed of about three sessile green flowers; calyxes of the male bell-shaped, five cleft; of the female hemispherical, scaly, entire; stamens commonly ten; stigmas three. These specific characters being appropriated by Linnæus himself, as well as by the most eminent British botanists, to our common English Oak, it may excite some surprise that Willdenow has changed the name into *Q. Pedunculata*, and applied *Robur* to the next species, an inferior tree, in which he has been followed by the Authors of the Kew Catalogue, to the regret of those who regard this monarch of our woods with a feeling of national veneration. April, May. Britain. T.

17. *Q. Sessiliflora*. *Sessile fruited Oak*. "Leaves on longish foot-stalks, deciduous, oblong, smooth, sinuses of the leaves opposite, rather acute; lobes obtuse; fruit sessile; nut oblong;" leaves on longer foot-stalks, more regularly wing cleft than the former; acorns almost perfectly sessile; wood of far less value. Var. 1. Durmast Oak, under surface of the leaves downy, with purple ribs. April, May. Britain. T.

18. *Q. Cerris*. *Turkey Oak Tree*. "Leaves on

very short stalks, oblong, deeply and unequally wing cleft, hairy beneath; lobes lanceolate, acute, somewhat angular; stipules longer than the foot-stalks; calyx hemispherical, bristly;" a tall handsome tree, not commonly cultivated; leaves varying, rougher or narrower, or blistery. May. South of Europe. 1735. T.

These are the principal species of *Quercus*; many additional ones are found in the woods of America, but they have scarcely been introduced into English plantations. To enumerate all the uses of our common English oak, would be equally superfluous and difficult; the galls upon the leaves are occasioned by an insect of the genus *Cynips*, which deposits an egg in the substance of the leaf. The bark is universally used to tan leather; acorns were formerly of considerable importance for feeding swine.

XXII. JUGLANS. *Jovis glans*, acorn or mast of Jove. Nat. ord. Linn. Amentaceæ. Juss. Terebin-taceæ. 11 Species.

1. *J. Re'gia*. *Common Walnut Tree.* "Leaves pinnate; leaflets about nine, oval, smooth, slightly serrate, equal," extremely fragrant; a large and handsome tree, with spreading boughs; the end leaflet stalked; male flowers in a close pendulous spike, female scattered, two or three together. April, May. Persia. 1562. T.

2. *J. Ni'gra*. *Black Walnut Tree.* "Leaves pinnate; leaflets numerous, oblong, lanceolate, serrate; fruit globular, roughish, dotted :" a large tree; leaves

when bruised aromatic; shell of the nut very hard and thick; kernel small. April, May. North America. 1629. T.

3. J. Cne'rea. *Shell-bark Walnut Tree.* "Leaves pinnate; leaflets numerous, oblong, lanceolate, serrate, softly downy beneath; foot-stalks clammy; fruit oblong, ovate;" a large tree; leaflets somewhat heart-shaped, broad at the base, not aromatic; fruit very long; shell deeply furrowed; kernel small. April. North America. 1656. T.

4. J. Al'ba. *Hickory, or White Walnut Tree.* "Leaves pinnate; leaflets seven, oblong, lanceolate, serrate, pointed, downy beneath, the odd one sessile; fruit nearly quadrangular, smooth;" a large tree; fruit shaped like the Common Walnut; the shell of a light colour, and not furrowed, thick, hard; kernel large, sweet. April, May. North America. 1629. T.

5. J. Compres'sa. *Flat fruited Walnut Tree.* "Leaves pinnate, oblong, lanceolate, acuminate, serrate, soft and downy beneath, the odd one sessile; fruit ovate; nuts oblique, compressed;" a middle sized tree; older branches with a rough scaly bark; nut flattened like a lens, but somewhat rhomb-shaped, smooth, thick, hard; kernel small. April, May. North America. 1730. T.

The Walnut Tree is universally known and admired, for the splendour of its foliage, the delicacy of its fruit,

and the utility of its wood, which, till the introduction of Mahogany, was generally used for articles of cabinet-work; the principal demand of late years has been for making gun-stocks. The unripe fruit for pickle, and the nuts for the desert, are generally esteemed. Gardeners are acquainted with many varieties. The nuts from the same tree will produce different fruit. The wood of *J. Nigra* is very valuable, being finely veined, and capable of receiving a high degree of polish. Hickory Wood is of a coarser grain, yet of much use for many things belonging to agriculture. The English name has nothing to do with Wall; but is supposed to be Gaul Nut, and consequently introduced from France.

XXIII. *Co'RYLUS*, of uncertain derivation; by some from *καρπός*, a walnut. Nat. ord. *Linn.* and *Juss.* Amentaceæ. 5 Species.

1. *C. Avella'na*. *Common Hazel Nut Tree.* "Stipules oblong, obtuse; leaves roundish, heart-shaped, acuminate; branchlets hairy:" a low tree; leaves alternate, on short stalks, doubly serrate, downy beneath; flowers appearing before the leaves; male catkins terminal, panicled, pendulous, many flowered; female flowers few, in tiled buds; styles scarlet; calyx at first small, enlarging as the fruit ripens, leathery, two lobed, torn at the tip; nut egg-shaped, even, hard, esculent. Its varieties are numerous: 1. White Filbert, with a small white fruit. 2. Red Filbert, fruit red, oblong, outer skin of the kernel

red. 3. Cob Nut, fruit round, large. 4. Clustered Nut, nuts crowded in a bunch. February to April. Britain. T.

2. C. Rostra'ta. *Dwarf Cuckold Nut Tree.* "Stipules lanceolate; leaves oblong, heart-shaped, acute; branchlets smooth; calyx of the fruit beaked;" catkins solitary; calyx remarkably long, continuing to cover the fruit when ripe. March, April. North America. 1745. T.

3. C. Colur'na. *Constantinople Hazel Nut Tree.* "Stipules lanceolate, acuminate; calyx of the fruit double, outer one with many divisions, inner one with three segments, palmate; leaves roundish, ovate, heart-shaped at the base;" clusters large; nut twice the size of the Common Hazel, entirely covered by the calyx. May, April. Turkey. 1865. T.

Nuts are very generally acceptable on account of their pleasant flavour; they are, however, of difficult digestion, and contain but little nourishment. Several improved varieties have been produced by cultivation and importation from more favourable climates. An oil is extracted from them, used by artists: the trees are an excellent under-wood, and are cut down periodically for making poles, fishing-rods, walking-sticks, hurdles, crates, and for other uses.

XXIV. CARPI'NUS, from *carpus*, the wrist, the handle of the plough being made of this wood; the same notion is expressed by the Greeks, who called

this plant the Yoke Tree. Nat. ord. Linn. and Juss. Amentaceæ. 3 Species.

1. *C. Betulus*. *Common Horn Beam Tree.* "Catkins leafy, loose; scales deeply three-cleft; lobes lanceolate, the middle one longest;" a slender tall tree, but commonly cultivated as a shrub for underwood and hedges; bark even, whitish, marked with grey spots; branches numerous; leaves ovate, acuminate, doubly serrate, smooth, wrinkled above, stalked, alternate; catkins appearing before the leaves. *B. Orientalis*, a tree of lower growth, with much smaller leaves and closer branches, is perhaps only a variety. There is also a variety with oblong cut leaves. March to May. Britain. T.

XXV. *O'STRYA*, from στρυα, a bone, on account of its hardness. Nat. ord. Linn. and Juss. Amentaceæ. 2 Species.

1. *O. Vulgaris*. *Common Hop Horn Beam Tree.* "Catkins ovate, pendulous, resembling those of the Hop; leaves ovate, acute; buds obtuse;" a smaller tree than the Common Horn Beam; leaves less wrinkled, doubly toothed, with iron-grey nerves; scales of the female catkin inflated. May. Italy. 1724. T.

2. *O. Virginica*. *Virginian Hop Horn Beam Tree.* "Catkins oblong, ovate, erect; leaves oblong, ovate, acuminate; buds acute;" a tree thirty feet

high, of quick growth; leaves numerous, deep green. Perhaps only a variety of the last. May, June. North America. 1692. T.

These trees are not very commonly cultivated; it has been usual to engraft them upon the common Horn Beam, a practice to be condemned, as the graft grows much faster than the stock, which renders the tree disproportional, unsightly, and liable to be broken by high winds at the point of union.

xxvi. *BETULA*, some say from *batus*, to beat, it being applied to the chastisement of school boys. Nat. ord. Linn. and Juss. Amentaceæ. 10 Species.

1. B. Al'ba. *Birch Tree*. "Leaves triangular, acute, doubly serrate, smooth; scales of the catkin with round lobes; leaf-stalks smooth, longer than the flower-stalks;" a tree from thirty to forty feet high; bark silvery; leaves small, bright green; branches alternate, flexible, brownish russet, erect, in young trees, but apt to become pendent in old ones, whence it obtains the name of Weeping Birch Tree. April to June. Britain. T.

2. B. Populifo'lia. *Poplar-leaved Birch*. "Leaves triangular, drawn out to a point, unequally serrate, very smooth; the scales of the catkin with roundish side lobes; leaf-stalks smooth." July. North America. 1750. T.

3. B. Excel'sa. *Tall Birch Tree*. "Leaves ovate, acute, serrate; scales of the catkin having the side

lobes rounded; leaf-stalks downy, shorter than the flower-stalks." May. North America. 1707. T.

4. B. Ni'gra. *Black Birch Tree.* "Leaves rhomb-ovate, acute, doubly serrate, downy beneath, entire at the base; scales of the catkin woolly; segments linear, equal;" a tall tree, rising to sixty feet; branches spotted; leaves on long stalks; twigs downy; bark white. July, August. North America. 1736. T.

5. B. Papyra'cea. *Paper Birch Tree.* "Leaves ovate, acuminate, doubly serrate; veins hairy beneath; catkin with scales undivided." June. North America. 1750. T.

6. B. Len'ta. *Canada Birch.* "Leaves heart-shaped, oblong, acuminate, sharply serrate; scales of the catkin three-cleft;" a tree sixty feet high; leaves smooth; female catkins sessile, ovate. July. North America. 1759. T.

7. B. Na'na. *Smooth Dwarf Birch Tree.* "Leaves roundish, crenate, smooth, netted with veins beneath;" an upright shrub, two or three feet high; branches scattered, somewhat gummy at the ends; leaves commonly three from each bud. May. Scotland. S.

8. B. Pu'mila. *Hairy Dwarf Birch.* "Leaves obovate, serrate, downy beneath; branches downy; female catkins cylindrical;" a shrub resembling the last; leaves more deeply notched. April, May. North America. 1762. S.

The wood of Birch is not very valuable, it is used for shoe heels and pattens, for making bowls, ladies, and

other domestic utensils, and in France for wooden shoes. The sap rising in the spring, obtained from a tap inserted into the stem of the tree, when properly fermented, makes a pleasant wine. The Birch tree merits a place in parks and ornamental woods, its straight stem, smooth and white bark, neat foliage, and pendulous twigs, exhibiting a picturesque appearance: it has a remarkably fragrant smell after rain. The Canada and the Black Birch being vigorous and lofty trees, may be cultivated to advantage. The remaining species are not commonly seen.

XXVII. PLA'TANUS, from πλατυς, broad, in allusion to its wide spreading branches. Nat. ord. Linn. and Juss. Amentaceæ. 4 Species.

1. P. Orienta'lis. *Oriental Plane Tree.* "Leaves palmate, five lobed, wedge-shaped at the base; segments lanceolate, sinuate; ribs pedate; stipules entire;" a very large tree, branches round, smooth, slightly zigzag; leaves deciduous, large, on long downy stalks. Var. 1. P. Acerifolia, *Spanish or Maple-leaved Plane Tree*, leaves not so deeply cut, stalks longer, upper surface rougher; segments remotely toothed. 2. P. Cuneata, *Wave-leaved Plane Tree*, leaves three or five lobed, toothed, smoothish. April, May. The Levant. 1548. T.

2. P. Occidenta'lis. *American Plane Tree.* "Leaves with five angles, slightly lobed, toothed, wedge-shaped at the base, downy beneath;" a very large tree, old branches with a grey bark; leaves about seven inches long, and ten broad, of a light

green, on short stalks; stipules wavy, with blunt teeth. April, May. North America. 1640. T.

The Greeks and Romans esteemed the Plane tree very highly for its shade and beauty; it was always planted about the Roman villas, and sometimes honoured with libations of wine. These trees are not very common in England, though said to be easily raised. In America and in the East they grow to a prodigious size, and their spreading branches feather down to the ground; in both species the scales of the bark are annually deciduous.

XXVIII. LIQUIDAM'BAR; from *liquidus*, fluid, and *amber*, a fragrant substance generally taken for ambergris, a liquid gum distilling from the tree. Nat. ord. Linn. and Juss. Amentaceæ. 2 Species.

1. L. *Styracifl'a.* *Maple-leaved Liquidambar, or Sweet Gum.* "Leaves palmate, acute, serrate; veins hairy at the base of their ramifications :" a tall straight, handsome tree, with a round head of alternate, stalked, shining leaves, clammy with a sweet glutinous substance, smaller than those of the Plane Tree, changing in autumn to rich hues of red and orange; it seldom blossoms or produces its gum, which is very fragrant, in this climate. March, April. North America. 1683. T.

2. L. *Imber'be.* *Oriental Liquidambar.* "Leaves palmate, bluntly crenate or wavy, obtuse; veins naked :" a tree differing from the last in having smaller leaves, whose lobes are blunt, and the veins

destitute of pubescence; scarcely now to be found in England. April. The Levant. 1759.T.

Order Monadelphia.

* *Pinus.* *Two or more leaves from the same sheathing base.*

xxix. *Pi'NUS*, synonymous with *πινυς*, the Pitch Tree, but perhaps a better derivation is from the Celtic *pin* or *pen*, a mountain. Nat. ord. *Linn.* and *Juss.* Coniferæ. 35 Species.

1. *P. Sylves'tris.* *Scotch Fir.* "Leaves in pairs, rigid, young cones recurved, hanging down; crest of the anthers very small:" a straight and lofty tree, the bark scales off in large light flakes; sheaths of the leaves membranous, rugged; leaves linear, obtuse, evergreen, smooth; flowers terminal, erect. Var. 1. *P. Tatarica.* *Tartarian Pine*, leaves shorter, broader, cones very small. Tartary. 2. *P. Pumilis,* *Mountain or Mugho Pine*, leaves two or three from the same sheath, erect; cones small, erect. Switzerland. 3. *P. Banksiana*, or *Divaricata*, *Hudson's Bay Pine*, leaves straddling, oblique; cones twisted. Hudson's Bay. 4. *P. Maritima*, *Maritime Pine*, leaves smooth; cones very long and slender. South of Europe. These varieties are not commonly cultivated. May. Scotland. E. T.

2. *P. Pinaster.* *Cluster Pine Tree.* "Leaves in pairs, long, somewhat rough at the edge; cones in

whorls, clustered, ovate, sessile, drooping, with somewhat pointed scales; crest of the anthers rounded;" a larger tree than the Scotch Fir; leaves four inches long; cone seven or eight inches long, pyramidal, with pointed scales. April, May. South of Europe.

1596. E. T.

3. P. Pine'a. *Stone Pine Tree.* "Leaves in pairs, primary ones fringed; cones ovate, obtuse, longer than the leaves, their scales with recurved deciduous points; seeds bony, with short wings; crest of the anthers jagged;" a tall handsome tree, leaves of a fine green; male blossoms copious; cones large, very thick. May. South of Europe. 1548. E. T.

4. P. Halepen'sis. *Aleppo Pine Tree.* "Leaves in pairs, very slender; cones ovate, oblong, drooping, stalked, polished, unarmed; crest of the anthers rounded, jagged;" male flowers spiked; branches growing horizontally to the very bottom of the trunk; a tree middle sized, somewhat tender, and but rarely seen, May. The Levant. 1683. E. T.

5. P. l'nops. *New Jersey Pine Tree.* "Leaves in pairs; cones drooping, oblong, conical, longer than the leayes; their scales with awl-shaped spines; crest of the anthers short, broad, jagged;" a middle sized tree, of straggling growth; wood early decaying. It has much the appearance of a stunted Scotch Fir, and is consequently but seldom cultivated. May. North America. 1739. E. T.

6. P. Resino'sa. *American Pitch Pine Tree.*

"Leaves in pairs, long, in long sheaths; cones ovate, sessile, nearly solitary, even, unarmed, not half the length of the leaves; crest short, jagged, narrower than the anther;" a very tall tree, with a smooth red bark; leaves four inches long; male flowers spiked, copious; anthers purple; cones two or three together, sessile. May. North America. 1756. E. T.

7. P. *Tæ'da*. *Frankincense Pine Tree*. "Leaves three together, in long sheaths; cones ovate, oblong, deflexed; scales with inflexed spines; crest of the anthers tiled, round:" a large tree, leaves six inches long; cones about three inches. Var. 1. P. *Varabilis*, with two or three leaves in a sheath. 2. P. *Alopecuroidea*, *Fox Tail Pine*, leaves in threes, spreading, rugged. 3. P. *Rigida*, *Three-leaved Virginian Pine*, leaves in threes; cones clustered, numerous; spines reflexed. May, June. North America. 1713. E. T.

8. P. *Palus'tris*. *Swamp Pine Tree*. "Leaves three together, very long, drooping, with long sheaths; stipules wing-cleft, reflexed, permanent; cones somewhat cylindric, prickly:" seldom seen in gardens, except of a small size, being tender; cone, in its native place of growth, ten or twelve inches long; points of the leaves finely serrate. May. North America. 1730. E. T.

9. P. *Stro'bus*. *Weymouth Pine*. "Leaves five together; cones cylindrical, tiled, smooth, longer than the leaves; crest of the anthers of two minute awl-

shaped bristles :" a large tree, growing in America to an enormous size ; leaves slender ; cones smooth, taper, deflexed, elegant ; it takes its English name from Lord Weymouth, the first Marquis of Bath, who paid much attention to its cultivation. April. North America. 1705. E. T.

10. P. Cem'bra. *Siberian Stone Pine Tree, Apenninæli.* " Leaves five together ; cones ovate, tiled ; wing of the seed obliterated ; crest of the anther kidney-shaped, crenate :" a tree of slow growth in England ; its aspect not very handsome ; leaves of a dull hue, fine and slender ; cones with a plum-like bloom ; seeds eatable. May. Switzerland, Siberia. 1748. E. T.

** *Abies. Leaves solitary, scattered.*

11. P. A'bies. *Norway Spruce, Prussian Fir Tree.* " Leaves solitary, four cornered ; cones cylindric ; scales rhomboid, flattened, waved and notched :" a tree growing in its native mountains to a hundred feet high, throwing out its branches so as to form a pyramid ; under side of the branches almost naked ; leaves copious, scattered, somewhat two rowed ; cones pendulous, solitary, terminal, long, cylindric, light brown. April. North of Europe. 1548. E. T.

12. P. Al'ba. *White Spruce Fir Tree.* " Leaves solitary, four cornered, incurved ; cones lax, nearly cylindrical, their scales obovate, wavy, entire :" a tree with the habit of the last, but smaller ; leaves smaller,

more incurved, with a glaucous hue ; bark of the stem whiter ; cones not above two inches long. May, June. North America. 1700. E. T.

13. P. Ni'gra. *Black Spruce Fir Tree.* "Leaves solitary, four cornered, straight ; cones ovate, their scales elliptical, notched at the end, erect :" a tree nearly the same size as the last ; leaves and flowers somewhat smaller ; cones ovate, purplish, not above an inch long, crowded about the sides of the last year's shoots ; the young branches are used for making spruce beer. P. Rubra seems scarcely to be a variety, leaves rather awl-shaped. The names of Black and White Spruce are given from the colour of the bark. May. North America. 1700. E. T.

14. P. Pice'a. *Silver Fir Tree.* "Leaves solitary, flat, somewhat two ranked ; cones cylindrical, erect, with long pointed scales ; crest of the anthers with two horns :" a tall handsome tree ; bark smooth, whitish ; branches horizontal ; leaves copious, linear, acute or notched, under surface glaucous, white ; cones three or four inches long, of a reddish green. May. Switzerland. 1603. E. T.

15. P. Balsa'mea. *Balm. of Gilead Fir Tree.* "Leaves solitary, flat, imperfectly two ranked ; cones cylindrical, erect, with short pointed scales :" a middling sized tree, but enduring not more than twenty years ; it has much the habit of the last, leaves wider, blunter, disposed on each side of the branches like the teeth of a comb, marked with whitish lines

beneath; cones roundish, small; buds and leaves remarkably fragrant. May. Virginia. 1696. E. T.

16. P. Canaden'sis. *Hemlock Spruce Fir Tree.*
"Leaves solitary, flat, two ranked, finely toothed; cones terminal, ovate, scarcely longer than the leaves;" an elegant tree, growing to a large size in America, but seldom seen here; its aspect is gloomy, partaking of that of the Yew; cones solitary, small, smooth, pale; scales few; leaves glaucous beneath. May. North America. 1736. E. T.

*** Larix. *Leaves in numerous tufts from each sheath.*

17. P. La'rix. *Common White Larch Tree.*
"Leaves tufted, deciduous; cones ovate, oblong; margin of the scales reflected, jagged; scales of the female catkin fiddle-shaped, prominent in the full grown cone;" a large and lofty tree; branches spreading, drooping at the extremities; buds perennial, scaly, producing annually a pencil-like tuft of numerous, linear, spreading leaves, which are of a bright green, soft, smooth, about an inch long; male flowers yellow, drooping; cones erect, purple, turning to reddish brown. March, April. Switzerland.
1629. T.

18. P. Pen'dula. *Black Larch Tree.* "Leaves tufted, deciduous; cones oblong; the margins of their scales inflexed; scales of the female catkin fiddle-shaped, concealed in the full grown cone;" a tree in habit and foliage so much resembling the last that it

is difficult to find specific distinctions ; female catkins of a more crimson hue ; cones smaller, more cylindrical. May. North America. 1759. T.

19. P. Microcar'pa. *Red Larch Tree.* "Leaves tufted, deciduous ; cones roundish, of few scales, inflexed at the margin ; scales of the female catkin oval, concealed in the full grown cone :" a tree very similar to the last ; leaves rather smaller ; cones considerably so, rounder, before ripening crimson, making a beautiful appearance. May. North America. 1760. T.

20. P. Ce'drus. *Cedar of Lebanon.* "Leaves tufted, perennial ; cones ovate, abrupt, their scales close pressed ; crest of the anthers ovate, flat, erect :" a large and lofty tree, branches very large, and spreading widely at top into a flat head. May. The Levant. 1683. E. T.

This important and well known genus has ever held a considerable place in the estimation of mankind, from its subserviency to their various wants. The wood of all the species is convertible into many uses, that of P. Syk-vestris is known by the name of red or yellow deal, and is the most valuable of all for the purposes of building, Common turpentine flows abundantly from its trunk, this when inspissated becomes resin ; tar is turpentine contaminated with the soot which is produced by the partial combustion of the wood for the purpose of extracting it, and this inspissated becomes pitch : all the species produce more or less of these substances. From P. Abies is prepared Burgundy pitch, which is the resin boiled in

water and strained through a cloth. This tree also affords the white deal of the carpenter, so well known for internal house work, boxes, packing cases, and a variety of other purposes. Venice turpentine is the product of *P. Larix*: Canada balsam, which some quacks call balm of Gilead, of *P. Balsamea*. The branches both of *P. Nigra* and *P. Alba* are used indiscriminately for the purpose of making spruce, a wholesome and pleasant drink abounding in fixed air. The kernel of the seeds of *P. Pinea* are sweet, and supply the place of nuts in Italy, and have done so from remote antiquity, as they were found amongst domestic stores in the pantries of Herculaneum and Pompeia. The Cedar has a venerable appearance, and pleasingly connects itself with many classical and scriptural associations: its wood is celebrated for its duration, and its powers of resisting the attack of noxious insects.

xxx. CUPRES'SUS, from *xwv*, to bring forth, and *rapos*, equal, alluding to the regularity of its branches. Nat. ord. *Linn.* and *Juss.* Coniferae. 7 Species.

1. *C. Sempervi'rens*. Common Cypress Tree.
"Branches four sided; leaves tiled, in four rows, obtuse, adpressed, convex; cones globular; scales awnless; branches stiff and straight;" a tall evergreen tree, very straight, with a brown bark; branches almost from the bottom of the stem, and forming a pyramid, in the manner of the Lombardy Poplar; leaves small, opposite, entirely covering the young branches, more distinct in the older ones, in winter of a dull hue, but brightening in the spring. There

is a variety with spreading branches, so strikingly different in habit that some have pronounced it a distinct species. May. Candia. 1548. E. T.

2. C. Lusita'nica. *Portugal Cypress Tree, or Cedar of Goa.* "Little branches four sided; leaves tiled, in four rows, adpressed, glaucous, keeled; cones somewhat globular; branches pendulous:" a small tree; leaves small, acute, lanceolate, opposite, with a gland on their back, those on the lower branches in distant pairs, dryish; cones the size of a Cherry, blueish. April, May. Goa. 1683. E. T.

3. C. Dis'ticha. *Deciduous Cypress Tree.* "Leaves linear, in two rows, deciduous, spreading:" a very large tree; branches extending horizontally; leaves acute, of a lively green; cones larger than those of the Common Cypress. It grows in ground covered with water three feet deep, its wood is light, durable, and useful. There is a variety with the leaves somewhat scattered. May. North America. 1640. T.

4. C. Thyo'ides. *White Cedar, or Arbor Vitæ-leaved Cypress Tree.* "Branches compressed; leaves tiled, close pressed, with a single gland at the back:" a middle sized evergreen tree; branches not pendulous, smaller ones flattened; leaves of a delicate green, small, opposite, in four rows. April, May. North America. 1736. E. T.

The first species is celebrated for its appropriation to funeral ceremonies with the ancients; it is somewhat tender, and cannot well resist our spring blasts: its wood is

extremely durable, not liable to be eaten by insects, and having a pleasant smell, is excellent for cabinet work. *C. Disticha* grows to an enormous size in America, being seventy feet high, and thirty in circumference. None of the species are very common in our plantations.

XXXI. THU'JA, from θυν, to perfume, it being an aromatic shrub. Nat. ord. Linn. and Juss. Coniferae. 5 Species.

1. *T. Occidentalis*. *American Arbor Vitæ*. "Young branches two edged; leaves tiled, in four rows, compressed, ovate, somewhat rhomboid, dotted; inner scales of the cone abrupt, tumid under the point;" an evergreen tree of humble growth, much branched; male flowers small, yellowish; cones drooping, the size of a nut, with about six scales; smell of the plant, when bruised, somewhat like Savine. May. Canada. 1596. E. T.

2. *T. Orientalis*. *Chinese Arbor Vitæ*. "Young branches two edged; leaves tiled, in four rows, compressed, ovate, somewhat rhomboid, with a central furrow; inner scales of the cone obtuse, with a recurved dorsal point;" a handsomer but less common tree than the former; branches crowded, erect; leaves furrowed, without a resinous dot; inner scales of the cone hooked. May. China. 1752. E. T.

These trees, though growing in their native countries to a considerable height, seldom arrive to any great size here; being much branched from the very bottom of the stem, and constantly adorned with leaves arranged in a curious,

compact; imbricated manner, they are highly ornamental either in the shrubbery or disposed singly in borders.

XXXII. ACALY'PHA, a name of Hebrew origin, but referred by some to a Greek combination of words signifying unpleasant to handle. Nat. ord. Linn. Tricoccæ. Juss. Euphorbiæ. 39 Species.

1. A. Virgi'nica. *Virginian Acalypha*. "Female flowers at the base of the spike; involucres ovate, acuminate, toothed; leaves oblong, lanceolate, remotely and obtusely serrate;" stem a foot high, branched; leaves like those of broad leaved Pellitory of the wall; flowers in clusters, resembling those of the same plant. July, August. North America, 1759. A.

XXXIII. PHYLLAN'THUS, from φύλλος, a leaf, and αὐθός, a flower, the flower in one of the original species growing out of the leaf. Nat. ord. Linn. Tricoccæ. Juss. Euphorbiæ. 36 Species.

1. P. Obova'tus. *Annual Carolina Phyllanthus*. "Leaves simple, obovate, bluntish; flowers axillary, stalked, in pairs; stem branched, round, erect;" leaves stalked, alternate, not an inch long; flowers small, greenish, one male, the other female. July, August. North America. 1803. A.

XXXIV. XYLOPHYL'LA, from ξύλον, wood, and φύλλος, a leaf, in allusion to the rigidity of its foliage.

Nat. ord. Linn. Tricoccæ. Juss. Euphorbiæ. 4 Species.

1. X. Ramiflo'ra. *Siberian Sea-side Laurel.*
"Leaves elliptical, stalked; flowers axillary;" stem bushy, with wand-like branches; leaves scattered, thin, blunt, crenate; flowers six or eight together, in a little tuft; segments of the calyx five, concave, white, with red minute floral leaves. July, August. Siberia. 1783. S.

xxxv. CRO'TON. Derivation unknown. Nat. ord. Linn. Tricoccæ. Juss. Euphorbiæ. 74 Species.

1. C. Tincto'rium. *Officinal Croton.* "Leaves ovate, rhomboid, sinuate, entire at the base, downy on both sides; flower-stalks terminal, somewhat three flowered; capsules scaly, downy, pendulous;" stem a foot high, cylindrical, branched, leafy; leaves alternate, stalked, clothed with short hairs; flowers in short sessile clusters, males most numerous; calyx woolly, five leaved. From the juice of this plant, called Heliotropium or Turn.sole by the old botanists, is obtained the colouring matter used for tinging wines and jellies of a claret hue. July, August. Spain. 1570. A.

xxxvi. RI'CINUS, from the resemblance of the seed to a little insect called *ricinus*, like a tick. Nat. ord. Linn. Tricoccæ. Juss. Euphorbiæ. 10 Species.

1. *R. Communis*. *Common Palma Christi*.
 " Leaves peltate; lobes lanceolate, serrate; stem herbaceous; stigmas three cloven at the tip;" stems round, thick, jointed, channelled, glaucous, of a purplish red upwards; leaves large, deeply divided into seven segments, on long, tapering, purplish stalks; flowers in long, green, glaucous spikes; the males in the lower part of the spike, the females in the upper. This species is subject to considerable varieties; it is with us a shrubby biennial, in Africa it becomes a tree: from the seeds of this plant is expressed the castor oil, so important for its medical properties as a certain though mild and safe cathartic. July, August. Both Indies. 1548. B. Hot Ho.

XXXVII. TRICHOSANTHES, from θρίξ, τριχος, a hair, and ἄνθος, a flower, in allusion to the fine capillary segments of the corolla. Nat. ord. Linn. and Juss. Cucurbitaceæ. 11 Species.

1. *T. Anguina*. *Snake Gourd, or Hair Blossom*.
 " Fruit cylindrical, elongated, incurved; leaves heart-shaped, lobed, wavy, with little pointed teeth;" herbage branched, trailing, luxuriant, with tendrils; leaves downy beneath; flowers in long stalked clusters, snowy white; fruit three or four feet long, of a dark shining green, lying coiled amongst the leaves like a snake. May, June. Chiua. 1755. A. Gr. Ho.

2. *T. Cucumerina*. *Cucumber Trichosantkes*.
 " Fruit ovate, acute; leaves roundish, heart-shaped,

deeply lobed, angular, wavy ;" every part of the plant fleshy ; stems herbaceous, angular, hairy ; leaves soft, downy ; flowers white, small, with a long entangled fringe ; fruit yellowish ; the seeds lodged in red pulp. June, July. East Indies. 1894. A. Gr. Ho.

XXXVIII. MOMOR'DICA, from *mordeo*, to bite, the seeds or rather the fruit having the appearance of being bitten. Nat. ord. Linn. and Juss. Cucurbitaceæ. 13 Species.

1. M. *Balsami'na*. *Common or Male Balsam Apple*. "Fruit roundish, ovate, pointed, angular, warty ; floral leaves heart-shaped, toothed, placed above the middle of the flower-stalk ; leaves smooth, five lobed, palmate, deeply toothed ;" stems long, weak, slender ; tendrils spiral, hair-like ; leaves alternate, stalked, about two inches wide, of a bright shining green ; flowers large, yellow, on axillary solitary stalks ; fruit two inches long, one inch broad, orange coloured, splitting at one side when ripe. June, July. India. 1548. A. Gr. Ho.

2. M. *Charan'tia*. *Hairy Balsam Apple*. "Fruit oblong, taper pointed, angular, warty ; floral leaves heart-shaped, entire, placed below the middle of the flower-stalk ; leaves seven lobed, palmate, bluntly toothed, somewhat hairy ;" fruit much longer than the former, more pointed at each end ; leaves more deeply palmate ; veins hairy beneath. June, July. East Indies. 1710. A. Gr. Ho.

3. M. Luffa. *Egyptian Balsam Apple.* "Fruit oblong, somewhat cylindrical, furrowed, smooth; netted within; male flowers corymbose; floral leaves at the base of each partial stalk, heart-shaped, entire; leaves rough, five lobed, toothed," with minute tubercles; tendrils many cleft; male flowers numerous, pale yellow, with orange streaks; fruit a spur long, swelling upwards, smooth. This plant is cultivated in Arabia, where it climbs up the Palm trees in a very picturesque manner. July, August. East Indies. 1739. A. Gr. Ho.

4. M. Elaterium. *Squirting Cucumber or Balsam Apple.* "Fruit elliptic, hispid, elastic at the base; leaves heart-shaped, wavy, rough; tendrils none;" herbage rank, spreading, rough, hairy; flowers dull yellow; males few together, in an axillary cluster, accompanied at the bottom by one female; fruit pendulous, blunt at each end, about two inches long, bristly, when ripe squirting out the seeds with great violence. The extract of this gourd is known by the name of Elaterium, a most violent and dangerous cathartic. June, July. South of Europe. 1548. P.

xxxix. Cu'cumis, from curver, a bending, alluding to the crookedness of the fruit. Nat. ord, Linn. and Juss. Cucurbitaceæ. 16 Species.

1. C. Colocyn'this. *Bitter Cucumber, or Colocynthida.* "Leaves many cleft; fruit globular, smooth;" stems slender, trailing, angular, rough with

hairs, branched ; leaves stalked, deeply sinuate, green above, white and a little downy beneath ; flowers small, yellow, axillary, solitary ; fruit the size of an orange, yellowish when ripe, containing an intensely bitter pulp, powerfully cathartic. May to August. The Cape. 1551. A. Gr. Ho.

2. C. Propheta'rum. *Globe Cucumber.* "Leaves heart-shaped, five lobed, finely toothed, obtuse ; fruit globular, spinous, prickly ;" stems a foot and a half long, trailing, slender, scored, rough with distant hairs ; leaves stalked, greenish, cloven half-way down into three lobes ; two lateral lobes toothed ; fruit variegated with green and yellow streaks, agreeing in bitterness with the last. A plant of a nauseous odour. June to September. The Levant. 1777. A. Gr. Ho.

3. C. Angu'ria. *Round Prickly-fruited Cucumber.* "Leaves palmate, sinuate ; fruit globular, prickly ;" stems four or five feet long, angular, hispid ; leaves stalked, rough ; flowers yellow, axillary, small as those of Bryony ; fruit whitish, the size of a pullet's egg. July, August. Jamaica. 1692. A. Gr. Ho.

4. C. Acutan'gulus. *Acute Angled Cucumber.* "Leaves rounded, angular ; fruit with ten acute angles ;" stem climbing, slender, five sided ; leaves stalked, heart-shaped, sharply angular, serrate, toothed, green above, pale beneath ; flowers yellowish, rather large ; males in a terminal cluster, females solitary, axillary ; fruit six or eight inches long, top-

shaped. June to September. India. 1692. A. Gr. Ho.

5. C. Melo. *Common Melon.* "Angles of the leaves rounded; fruit warted, or netted with veins;" stems trailing to a great length, much branched with tendrils, rough; leaves alternate, stalked, slightly toothed, bristly; flowers yellow, rather small, axillary, solitary, on short stalks; calyx covered with white hairs; corolla wrinkled, ribbed, with bristles on the ribs on the outside; germ nearly globular, covered with white hairs; fruit varying from round to oval. May to September. Native country unknown.

1570. A. Gr. Ho.

6. C. Duda'im. *Apple-shaped Cucumber.* "Angles of the leaves rounded; fruit cylindrical, with the navel retuse;" lower leaves roundish, upper somewhat angular, both slightly woolly and toothed; flowers yellow, divided into five or six roundish segments, slightly crenate; fruit the size and form of an orange, rind smooth, sparingly warted, furrowed slightly at the top, variegated with green and dark orange streaks and oblong green spots; it has a vinous musky smell, with a whitish insipid pulp. July, August. The Levant. 1705. A. Gr. Ho.

7. C. Cha'te. *Hairy Cucumber.* "Hirsute: angles of the leaves rounded, toothed; fruit spindle-shaped, tapering at both ends, rough with hairs;" whole plant woolly, whitish green, with the habit of the Melon; stems procumbent, woolly, zigzag, branch-

ed; leaves stalked; flowers yellow, small, axillary.
June. The Levant. 1759. A. Gr. Ho.

8. C. *Sati'vus*. *Common Cucumber*. "Leaves with right angles; fruit oblong, ovate, rough;" stem creeping, hispid, rough; leaves larger, longer, thicker than those of the Melon, less rounded, with sharper angles; flowers of a deeper yellow, axillary; germ oblong, obscurely angular, not hairy but prickly, the prickles rising from a warty substance; fruit yellowish white or green, in different varieties. July to September. Tartary. 1573. A.

9. C. *Flexuo'sus*. *Snake Cucumber or Melon*. "Leaves angular, somewhat lobed; fruit cylindrical, furrowed, curved;" stems slender, creeping, woolly; leaves stalked; flowers small, yellow, axillary; fruit the size of a large Pear, of a delicious flavour. July, August. East Indies. 1597. A. Gr. Ho.

The Melon, at its first introduction, was long confined to the tables of the great and opulent. Like all plants much cultivated, its varieties are very numerous; none exceeds in flavour the Cantaloupe, so called from a seat of the Pope near Rome, where it is largely cultivated. Cucumbers partake of equal variety in flavour, form, and colour: they are more easily raised.

XL. *CUCUR'BITA*, a curvitate, from the bending of the fruit. Nat. ord. Linn. and Juss. Cucurbitaceæ. 13 Species.

1. C. *Lagen'aria*. *Bottle Gourd, or Calabash*.

" Leaves heart-shaped, somewhat angular, woolly, with two glands beneath at the base; fruit woody;" stems thick, long, climbing, with branched tendrils; flowers large, spreading, wrinkled, white, on long stalks; fruit shaped like a bottle, varying to round and pear-shaped, pale yellow when ripe, growing sometimes to six feet in length, and eighteen inches round, the rind becoming a hard shell. July to September. Both Indies. 1597. A.

2. C. Pe'po. *Pompion*, or *Pumpkin Gourd*. " Leaves heart-shaped, obtuse, somewhat five lobed, finely toothed; fruit roundish, or oblong, even surfaced, glossy;" stems thick, angular, hispid, branched, climbing by means of two-cleft tendrils, or spreading on the ground to the distance of forty feet; flowers yellow, lateral, solitary, stalked; teeth of the calyx large, reflexed; fruit roundish, ovate, globular, or oblong, ovate, very large, sometimes nearly a hundred pounds weight. June to August. The Levant. 1570. A.

3. C. Verruco'sa. *Warted Gourd*. " Leaves heart-shaped, toothed, deeply five lobed, middle lobe narrowed at the base; fruit roundish, elliptic, warted;" stems very branchy and spreading, running on the ground; leaves large; flowers yellow; fruit roundish, knotty, warted, whitish, of a middling size. June, July. Native country unknown. 1658. A.

4. C. Me'lo-pe'po. *Squash Gourd*. " Leaves heart-shaped, obtuse, generally five lobed, finely

toothed; fruit with depressed knobs, tumid at the edge;" stem roundish, hairy, procumbent or climbing, with three-cleft tendrils; branches many, long: leaves hairy, alternate, long stalked; flowers yellow; segment of the calyx spoon-shaped; fruit large, reddish yellow both within and without, roundish, often flat at top and bottom, constantly swelling into veins, but not warted. May to September. Native country not known. 1587. A.

5. C. *Citrul'lus*. *Water Melon*. "Leaves five lobed; lobes sinuate, wing-cleft, obtuse; fruit elliptical, even surfaced;" stem round, scored, long, branched, hairy; flowers yellow; fruit large, smooth, round or oblong, a foot and a half long, watery, sweet, the flesh very red, but sometimes pale. May to September. South of Europe. 1597. A. Gr. Ho.

This genus is nearly allied to the last, being distinguished from it only by the tumid border of the seeds; the species, in general, are more hardy, except the Water Melon, which is much esteemed throughout the South of Europe, and in the East, for its wholesome cooling fruit, so succulent that it melts in the mouth: the oblong variety of the Pumpkin is sometimes pickled, under the name of Mango, which is improperly applied; the real Mango being a sweet East Indian fruit, the size of a large plum. In America, C. *Verrucosa* is boiled and eaten as a sauce with meat, and occasionally in England: the squash is of use in long voyages, as it may be kept for several months fresh and sweet. All these plants form such nu-

merous varieties, as often to prove a great stumbling block in the way of the systematic botanist, and to baffle his utmost powers of discrimination.

XLI. *Sicyos*, from the *σικυός* of Theophrastus; which seems to have been the Common Cucumber. Nat. ord. Linn. and Juss. Cucurbitaceæ. 4 Species.

1. *S. Angula'ta*. *Single seeded Cucumber, or Choko Vine.* "Leaves five angled, minutely toothed, rough, heart-shaped, with an obtuse sinus at the base;" stem branched, hairy, weak, climbing; tendrils spiral, divided; leaves alternate, on long stalks, pointed, more or less toothed; flowers whitish, marked with green lines, axillary; the male ones in clusters, the females in heads; fruit ovate, pale, spinous, half an inch long, about eight together in a round head. July to September. North America. 1710. A.

XLII. *BRYO'NIA*, from *βρύω*, to sprout out; no plant making longer shoots. Nat. ord. Linn. and Juss. Cucurbitaceæ. 33 Species.

1. *B. Dioi'ca*. *Red berried Bryony.* "Leaves palmate, rough on both sides, with callous points, male and female flowers on different plants;" root large, fleshy, white; stems climbing, angular, rough, leafy, somewhat branched, very long; leaves alternate, stalked; tendrils simple; corolla white, marked with green veins; berries globular, scarlet, smooth; seeds six. May to September. Britain. P.

Formerly this plant was used as a powerful cathartick. Its roots have been made artificially to grow in a form somewhat resembling the human shape, and so to pass for those of the celebrated Mandrake, *Atropa Mandragora*, to which many fanciful virtues were attributed; under that genus, Vol. I. p. 165, it was hastily affirmed that the Mandrake of the Scriptures could not be the plant in question. The meaning of the Hebrew word *dudaim* being totally unknown, it seems that it has been interpreted by all sorts of plants, Lilies, Roses, Violets, Melons, Raspberries, and many others; but the *Mandragora* of the *Septuagint* is, after all, probably right, as the reputed properties of this plant, as a philtre, account very well for the desire of Rachel to possess it, and for the reluctance of Leah to resign it. Its etymology from a Hebrew root, signifying love, confirms this notion. The Mandrakes of the Canticles, which "gave a smell," may not intend the same plant, but may merely associate ideas of affection with any fragrant flower; such at least is the ingenious hypothesis of the learned President of the Linnaean Society.

Order *Gynandria.*

XLIII. ANDRACH'NE, from ἄνδρος, male, and ἄχνη, chaff. Nat. ord. *Linn.* *Tricoccæ.* Juss. *Euphorbiæ.* 2 Species.

1. A. *Telephiorides*. *Bastard Orpine.* " Procumbent, herbaceous;" a low trailing plant, of no great beauty, and seldom seen unless in botanic gardens; leaves small, oval, smooth, glaucous. July, August. The Levant. 1732. A.

CLASS XXII.

DIOECIA.

Order Diandria.

i. **SALIX.** Male, catkins cylindrical; calyx a scale; corolla none; nectary a gland at the base of the stamens within; stamens one to five. Female, calyx and nectary like the male; corella none; stigmas two; capsule superior, of one cell and two valves; seeds downy.

Order Triandria.

ii. **EMPETRUM.** Male, calyx three-parted; corolla of three petals; stamens long, from three to nine. Female, calyx and corolla as the male; stigmas nine; berry superior, with from three to nine seeds.

iii. **PHOENIX.** Universal sheath one valved. Male, calyx three-parted; corolla three petalled. Female, calyx and corolla as in the male; pistil one; drupe ovate.

Order Tetrandria.

iv. **HIPPOPHAE.** Male, calyx in two deep segments; corolla none. Female, calyx tubular, cloven; style one; berry one; seed solitary, double coated.

v. **VIScum.** Male, calyx none; petals of the corolla four, calyx-like, dilated and adhering at the

base; anthers sessile upon the petals. Female, calyx a slight border; petals of the corolla four, calyx-like, dilated at the base; style none; berry inferior, with one seed.

VI. MYRICA. Male, catkin oblong; calyx an ovate scale; corolla none. Female, catkin, calyx and corolla the same as the male; styles two; drupe one seeded.

VII. BROUSSONETIA. Male, catkin cylindrical; calyx four-parted; corolla none. Female, calyx tubular, in four segments; corolla none; style one, lateral; seed solitary, elevated on a pulpy, club-shaped, forked receptacle; common receptacle globbose, bristly.

Order Pentandria.

VIII. CANNABIS. Male, calyx five cleft; corolla none. Female, calyx one-leaved, entire, opening on one side; corolla none; styles two; nut two valved within the closed calyx.

IX. HUMULUS. Male, calyx of five leaves; corolla none; anthers with two pores at the summit. Female, catkin with oblique entire scales; corolla none; styles two; seed two valved, solitary, enclosed in the scale of the calyx.

X. PISTACIA. Male, calyx five cleft; corolla none. Female, calyx three cleft; corolla none; styles three; drupe dry; nut single seeded.

XI. SPINACIA. Male, calyx deeply five cleft; corolla none. Female, calyx four cleft; corolla none;

styles four; seed solitary, within the hardened calyx.

XII. ACNIDA. Male, calyx five-parted: corolla none. Female, calyx three-parted; corolla none; style one; stigmas three, sessile; capsule one seeded.

XIII. XANTHOXYLUM. Male, calyx four-parted; corolla none. Female, calyx five-parted; corolla none; pistils five; capsules five, one seeded.

Order Hexandria.

XIV. SMILAX. Male, calyx six leaved; corolla none. Female, calyx six leaved, inferior, deciduous; corolla none; styles three; berry of three cells; seeds one to three.

XV. TAMUS. Male, calyx six-parted; corolla none. Female, calyx six-parted; corolla none; style three cleft; berry inferior, three celled; seeds two in each cell.

XVI. DIOSCOREA. Male, calyx six-parted; corolla none. Female, calyx six-parted; corolla none; styles three; capsule three celled, compressed; seeds two, membranaceous.

Order Octandria.

XVII. POPULUS. Male, catkin cylindrical; calyx scale lacerated; corolla top-shaped, oblique, entire. Female, catkin, calyx and corolla as in the male; stigmas four; capsule superior, with two cells and two valves; seed winged with down.

xviii. Rhodiola. Male, calyx four-parted; corolla four petalled; nectaries four, notched. Female, calyx, corolla, and nectaries, as in the male; pistils four; capsules four, many seeded.

Order Enneandria.

xix. MERCURIALIS. Male, calyx three-parted; corolla none; stamens from nine to twelve; anthers two, globose. Female, calyx three-parted; corolla none; styles two; capsule two berried, two celled; seed solitary.

Order Decandria.

xx. GYMNOCLADUS. Male, calyx tubular; five cleft; corolla five petalled. Female, calyx and corolla like the male; style one; legume one celled, pulpy within.

xxi. SCHINUS. Male, calyx five cleft; corolla five petalled. Female, calyx and corolla like the male; berry superior, of three cells.

xxii. CORIARIA. Male, calyx five-parted; corolla none; glands five; anthers two-parted. Female, calyx, corolla, and glands as in the male; styles five; capsules five, one seeded, covered with the enlarged glands.

Order Dodecandria.

xxiii. MENISPERMUM. Male, calyx two leaved; exterior petals of the corolla four to six; interior petals eight; stamens sixteen. Female, corolla as in

the male; eight imperfect stamens; berries two or three, single seeded.

XXIV. DATISCA. Male, calyx five leaved; corolla none; anthers fifteen, sessile, oblong. Female, calyx two toothed; corolla none; styles three; capsule inferior, triangular, three horned, pervious, of one cell, with many seeds.

Order Monodelphia.

XXV. JUNIPERUS. Male, catkin evate; calyx a scale; corolla none; stamens three. Female, scales of the catkin fewer than in the male, at length pulpy, united into a berry with three seeds.

XXVI. TAXUS. Male, calyx none; corolla none; stamens numerous; anthers peltate, with eight segments. Female, calyx pitcher-shaped, entire; corolla none; style none; seed one, partly enveloped in the pulpy calyx.

XXVII. EPHEDRA. Male, scales of the catkin two cleft; corolla none; stamens seven; anthers four, inferior; three superior. Female, calyx cloven, five fold; corolla none; pistils two; seeds two, inclosed in the pulpy calyx.

XXVIII. RUSCUS. Male, calyx of six leaves; corolla none; nectary ovate, tubular, bearing the stamens on its margin within. Female, calyx, corolla, and nectary like the male; style one; berry three celled; seeds two.

CLASS XXII.

DIOECIA.

Order *Diandria*.

* Leaves smooth, serrate.

1. *SALIX*, from *salio*, to spring up; alluding to the quickness of its growth. Nat. ord. *Linn.* and *Juss.* Amentaceæ. 116 Species.

1. *S. Trian'dra*. *Long-leaved Triandrous Willow*. "Leaves linear, oblong, serrate, smooth, rather unequally sloping at the base; catkins accompanying the leaves triandrous; germ stalked, ovate, compressed, smooth; stigmas nearly sessile;" a large tree, the bark scaling off annually; leaves of a fine green, rather glaucous beneath; two to four inches long; foot-stalks abrupt at the base, not decurrent. May to August. Britain. T.

2. *S. Amygdali'na*. *Almond-leaved Willow*. "Leaves ovate, unequal at the base, serrate, smooth; catkins accompanying the leaves triandrous; germ stalked, ovate, compressed, smooth; stigmas nearly sessile; young branches furrowed;" a small tree, casting its bark: it often produces a summer crop of blossoms. April, May. Britain. T.

3. *S. Pentan'dra*. *Sweet or Bay-leaved Willow*.

"Leaves elliptic, lanceolate, or ovate, pointed, crenate, glandular at the edge, smooth; foot-stalks glandular at the top; catkins following the leaves; stamens five or more, hairy; germs ovate, smooth, nearly sessile;" a smallish tree; foliage broad, shining, of a balsamic scent. March to June. Britain. T.

S. S. Vitelli'na. *Yellow Willow, or Golden Osier.*

"Leaves lanceolate, acute, with cartilaginous serratures, smooth above, glaucous, and somewhat silky beneath; stipules small and deciduous, smooth on their inside; germ sessile, ovate, lanceolate, smooth; stigmas nearly sessile, two lobed;" a moderately sized tree; twigs pendent, golden; leaves narrow, tapering. March to May. England. T.

5. S. Fra'gilis. *Crack Willow.* "Leaves ovate, lanceolate, pointed, serrate throughout, very smooth; foot-stalks glandular; germ ovate, nearly sessile. Male flowers with an abortive germ;" a large bushy tree; branches crooked, those of a year's growth brittle, breaking from the trunk at a slight blow, whence its name; leaves four or five inches long, of a dark shining green. April, May. Britain. T.

6. S. Babylo'nica. *Weeping Willow.* "Leaves lanceolate, taper pointed, sharply serrate, smooth, glaucous beneath; stipules half ovate, taper pointed, revolute; catkins naked, accompanying the leaves; germs ovate, sessile, smooth; branches pendulous;" a tree much admired for its elegant drooping branches.

The male plant is unknown in England. May. The Levant. 1692. T.

7. S. *Parpū'rea*. *Bitter purple Willow.* "Decumbent; one stamened; leaves obovate, lanceolate, serrate, smooth, narrow at the base; stigmas very short, ovate, nearly sessile;" a shrub five or six feet high; twigs of a glaucous purple; leaves of a deep glaucous green; bark and leaves bitter. March: England. S.

8. S. *He'lix*. *Rose Willow.* "Erect, one stamened; leaves mostly opposite, oblong, lanceolate, pointed, slightly serrate, smooth, linear at the base; style nearly as long as the linear divided stigmas;" a small slender tree; branches ash-coloured; some rose-like expansions, permanent through the winter, caused by the attack of an insect, are frequent at the ends of the branches. March, April. Britain. T.

9. S. *Ru'bra*, *Green-leaved Osier.* "Stamens combined below; leaves linear, lanceolate, elongated, acute, smooth, with shallow serratures, green on both sides," flowering before the leaves appear: a small tree, with long, upright, polished branches; leaves grass green. April, May. England. T.

** *Leaves woolly.*

10. S. *Capre'a*. *Great round-leaved Sallow.* "Leaves ovate, pointed, serrate, waved, downy beneath; stipules crescent-shaped; germ ovate, downy,

on a long hairy stalk; stigmas undivided, nearly sessile;" a moderate sized tree, with spreading, brown, purplish branches; leaves two or three inches long, under side cottony; catkins thick and blunt. April, May. Britain. T.

11. S. Aquatica. *Common Water Sallow.* "Leaves slightly serrate, obovate, elliptical, downy, flat, rather glaucous beneath;" stipules rounded, toothed; stigmas nearly sessile; a large shrub or small tree; branches reddish. This is the S. Cinerea in Withering's arrangement; the flowering branches are sought after by children in the Spring, under the name of Palms. April, Britain. P.

12. S. Viminalis. *Common Osier.* "Leaves linear, inclining to lanceolate, very long, pointed, entire, somewhat wavy, silky beneath; branches straight and slender; germs sessile; style as long as the undivided linear stigmas;" a somewhat large tree; branches numerous, slender, tough, flexible; under surface of the leaves silvery. April, May. Britain. T.

13. S. Alba. *Common White Willow.* "Leaves elliptic, lanceolate, acute, serrate, silky on both sides, the lowest serratures glandular; stamens hairy; stigmas deeply cloven;" a tall tree, with a thick bark, full of fissures; branches spreading, in some degree drooping; leaves grey and silvery; stipules roundish. April, May. Britain. T.

Of this numerotus and most intricate genus, Nos. 1, 3, 6, 13, are admitted into ornamental plantations. Nos. 1,

3, 4, 5, 7, 9, 12, particularly the last, are in use for all sorts of basket-work. The wood of S. Alba and of S. Caprea is used for pales, stakes, hoops, &c. the latter also is fit for the turner, to make handles for tools, small casks, trays, and such like articles. Its twigs are particularly serviceable for hurdles. The bark of Nos. 3, 5, 10, 13, is good for tanning, and has been used in place of the Peruvian Bark in intermittent fevers, it is said, with considerable success.

Order *Triandria.*

II. EM'PETRUM, from εν, in or upon, and πέτρης, a rock; expressing its stony barren places of growth. Nat. ord. Linn. not arranged. Juss. Ericæ. 3 Species.

1. E. Nigrum. *Black Crowberry, Crakeberry.*
" Stems procumbent, branches smooth; leaves oblong, smooth, revolute at the margin :" a small trailing shrub; leaves in fours; flowers reddish, axillary, solitary, sometimes perfect; fruit brownish black, with a flavour of elder berries. April, May. Britain. S.

III. PHOE'NIX, the φοῖνιξ of the Greek botanists; from φῶνες, red; such being the colour of the sheath. Nat. ord. Linn. and Juss. Palmæ. 3 Species.

1. P. Dactylifera. *Common Date Palm Tree.*
" Leaves pinnate, without thorns; leaflets linear, lanceolate, folded straight :" a tree of lofty stature, consisting of a straight simple trunk, crowned with a noble evergreen tuft of long leaves; flowers white,

very numerous, in drooping bunches, enveloped in a large sheath; fruit oblong, greenish yellow, when ripe, ruddy. The Levant. 1597. E. T. Hot Ho.

In the south of France this plant will form a handsome tree; but it has never blossomed in England. It is remarkable for the utility of its fruit, and the proof it has afforded of the sexual doctrine of Linnaeus, the fact of the separation of the sexes being recorded by the ancients. It makes a conspicuous figure in Egyptian scenery.

Order Tetrandria.

IV. HIPPO'PHAE, from ἵππος, a horse, and φαίνειν, to give light; it being supposed to cure blindness in horses. Nat. ord. *Linn.* Calicifloræ. *Juss.* Eleagni.
2 Species.

1. H. Rhamnoi'des. *Sallow Thorn, Sea Buck-thorn.* "Leaves linear, lanceolate, smooth above, whitish, and scaly beneath;" stem bushy, about six feet high, thorny; leaves scattered, two inches long; flowers axillary, solitary, small, green; berries tawny, the size of a large currant, pulpy, acid. April, May. England. S.

2. H. Canaden'sis. *Canadian Sea Buckthorn.* "Leaves oblong, with starry hairs above, with reddish white hairy scales beneath;" branches opposite; flowers in little brown, shining, axillary clusters; leaves shorter, broader than the former. April, May. North America. 1750. S.

v. VIS'CUM, from οἰξός, θέλος, θετός, tenacious;

on account of the glutinous quality of the berry.
Nat. ord. Linn. Aggregate. Juss. Caprifolize. 17
Species.

1. V. Al'bum. *Common Mistletoe.* "Leaves lanceolate, obtuse, without ribs; stem forked; flowers five together, in terminal sessile heads;" a parasitical shrub, on the branches of apple trees, hawthorns, limes, oaks, and firs; pale green, becoming yellowish; flowers crowded, yellowish; anthers dotted; berries pearly; pulp glutinous, making an indifferent sort of bird-lime. May. England. S.

VI. MYRI'CA, from μυρος, sweet ointment; it having a pleasant smell. Nat. ord. Linn. and Juss. Amentaceæ. 10 Species.

1. M. Ga'le. *Sweet Gale, Dutch Myrtle.* "Leaves lanceolate, with shallow serratures; fruit crowded; stem shrubby," three or four feet high, bushy; leaves alternate, an inch and a half long, deciduous; berries small, fragrant; flowers sometimes perfect. May. Britain. S.

2. M. Ceri'fera. *Common America Candleberry Myrtle.* "Leaves elliptic, lanceolate, somewhat serrate; stem tree-like; berries globose;" leaves large, broader than the former; berries fewer, larger. Var. 1. M. Carolinensis, a lower shrub, with leaves still broader. May. North America. 1699. E. S.

3. M. Fa'ya. *Azorian Candleberry Myrtle.* "Leaves elliptic, lanceolate, somewhat serrate; male

catkins compound; female flowers distant; fruit elliptic, coarsely granulated;" fruit twice the size of the last, oval, covered with the same waxy substance. June, July. Madeira. 1777. E. S.

The berries of all the species have an agreeable scent, not unlike that of red cedar; from those of the two latter species a substance is procured, by boiling, of an unctuous nature, which floats on the water, this is manufactured into candles, of a greenish colour; they are dearer than tallow, but cheaper than wax; they afford but an indifferent light, and are not much used, the berries being difficult to gather.

VII. BROUSSONETIA, in honour of Dr. Broussonet, a French botanist and physician, who died during the period of the revolution in France. Nat. ord. Linn. Scabridæ. Juss. Urticæ. 1 Species.

1. B. Papyri'fera. *Paper Mulberry Tree.* A deciduous tree, of moderate size, with the aspect of a Mulberry Tree; branches alternate, round, downy, leafy at the extremities; leaves alternate, stalked, heart-shaped, acute, serrate, sinuate, upper side of a dull green, rough with tubercles, the under pale and downy, with numerous veins; flowers axillary, stalked; males in dense greyish spikes; females in dense green globular heads. February to September. Japan. 1751. T.

The clothing of the inhabitants of the South Sea Islands, when first discovered, was almost entirely prepared from

the bark of this tree : they placed several layers of the bark over each other, and incorporated them by beating, aided by some slight cement. This substance was so elegantly coloured with some of the natural productions of the island, as to excite a great degree of admiration.

Order Pentandria.

VIII. CAN'NABIS, from καναβος, muddy springs, in which this plant grows. Nat. ord. *Linn.* Scabridæ. *Juss.* Urticæ. 1 Species.

1. C. Sati'va. *Common Hemp.* Stem from six to eight feet high, upright, obscurely four cornered, a little hairy; leaves opposite, stalked, digitate; leaflets five or seven, lanceolate, acuminate, serrate, outer ones smallest; male flowers in loose spikes; female flowers axillary, solitary; sometimes a few female flowers are found on the male plants; and sometimes a few males on the female plants. June, July. India. A.

The uses of Hemp, for sails and cordage for the navy, are well known. The stems are macerated in water, and prepared by various machinery : it makes strong and excellent cloth for sheets, table linen, and other purposes; the seeds are reckoned a good food for poultry; small birds are very fond of them. It has been said, that if bullfinches and goldfinches are fed too plentifully upon them, the brilliancy of their red and yellow plumage is much diminished, if not totally lost.

ix. **HUMULUS**, from *humus*, moist earth, in which it delights to grow. Nat. ord. *Linn.* Scabridæ. *Juss.* Urticæ. 1 Species.

1. **H. Lu'pus.** *Hop.* Stem twining, angular, rough, with deflexed prickles, leafy; leaves opposite, stalked, heart-shaped, undivided, or three lobed, often five lobed, serrate, veiny, harsh; leaf-stalks strong, angular, prickly; stipules between the leaf-stalks, reflexed, ovate; flowers green, the males panicled, numerous; females in axillary, stalked, drooping catkins of an aromatic scent, and bitter flavour. June to August. Britain. P.

The young shoots of this plant are eaten early in the spring, as asparagus; the herb will dye wool yellow; a cloth may be made from the stems; a decoction of the root is said to be sudorific, and to answer the purposes of sarsaparilla; a pillow filled with hops will sometimes produce comfortable repose, in cases where opiates have been unsuccessful: but the chief use of this plant is to prevent beer from becoming sour, by infusing therein the female catkins. This custom seems to have been introduced into England about the year 1524, and, like many other improvements, was violently opposed as a dangerous innovation; before its introduction, Ground Ivy was generally used for this purpose; and since, when hops are dear, many other plants, such as Wormwood, Horehound, Buck-bean, &c. the last of which is said to afford a more wholesome bitter.

x. **PISTA'CIA**, from *πίττα*, pitch; alluding to the

abundance of its resin. Nat. ord. *Linn.* Amentaceæ.
Juss. Terebinthaceæ. 6 Species.

1. *P. Officina'rum.* *Pistacia Nut Tree.* "Leaves simple, pinnate, or ternate; leaflets oval; fruit ovate, pointed;" a smallish tree, seldom seen in England; fruit panicled, an inch long, ovate, with an oblique point, reddish, its kernel of a greenish hue, of a pleasant flavour; in use at some tables in ragouts and ratatou. April, May. The Levant. 1570. T.

2. *P. Terebin'thus.* *Common Turpentine Tre.* "Leaves pinnate; leaflets numerous, ovate, lanceolate, acute, recurved; flowers panicled; segments of the calyx awl-shaped, longer than the stamens;" trunk and branches rugged, and bent in all directions; leaves when young of a reddish hue; flowers in large compound panicles; fruit scarcely bigger than a pea. The resin of this tree is the Chian or Cypress Turpentine. June, July. Barbary. 1658. T.

3. *P. Lentis'cus.* *Mastick Tree.* "Leaves abruptly pinnate; leaflets ovate, lanceolate; flowers in clusters; segments of the calyx ovate, shorter than the stamens;" a small tree; leaves of a lucid green; flowers herbaceous; berries small, black. Its resin is mastick, which is chewed by females in the Levant to sweeten the breath: the fragrant wood is made into tooth-picks. May. The Levant. 1664. E. T. Gr. Ho.

XI. SPINA'CIA, from *spina*, a thorn; on account of the prickly or spinous integument of the fruit. Nat. ord. Linn. Holaracea. Juss. Atriplices. 2 Species.

1. S. Oloracea. *Garden Spinach.* "Fruit sessile;" stem one or two feet high, herbaceous, branched, hollow; leaves arrow-shaped; male flowers herbaceous, in long spikes, abounding with pollen; female flowers in clusters, on the stalks, at every joint, herbaceous, small; seeds roundish, sometimes prickly, sometimes smooth. The leaves are a well known and excellent pot herb. March to October. Native country unknown. 1563. A.

XII. ACNI'DA, from a privative, and *νίδη*, a nettle, to which it bears some resemblance, but without stings. Nat. ord. Linn. Scabridæ. Juss. Atriplices. 2 Species.

1. A. Canna'bina. *Virginian Hemp.* "Leaves lanceolate; capsules smooth, acutely angular;" leaves quite entire, long, alternate; clusters solitary on the axils, sometimes branched, naked, loose, upright. A plant near akin to Hemp; of little beauty, and no use: seldom cultivated, unless in botanic gardens. June, July. North America. 1640. A.

XIII. XANTHO'XYLUM, from *ξανθός*, yellow, and *ξύλον*, wood, alluding to its yellow hue. Nat. ord. Linn. Hederaceæ. Juss. Terebintaceæ. 12 Species.

1. X. *Fraxineum*. *Ash-leaved Yellow Wood, or Common Tooth Ache Tree.* "Stem prickly; leaflets ovate, very minutely serrate, equal at the base; umbels axillary:" a large deciduous shrub; branches armed with brown prickles, very broad at the base; leaflets four or five pair, with an odd one; flowers small, yellowish green, in little dense umbels. A tincture of the bark and capsules is in use in America for rheumatic affections. March, April. North America. 1759. P.

2. X. *Cla'va Her'culis*. *Great prickly Yellow Wood.* "Stem with broad angular prickles; leaves pinnate; leaflets ovate, pointed, crenate, nearly equal at the base; common foot-stalk prickly; flowers terminal, panicled:" a large tree; leaves a foot long; leaflets about seven pair. April, May. North America. 1739. T. Gr. Ho.

3. X. *Tricar'pum*. *Three capsuled Yellow Wood.* "Stem prickly; leaflets stalked, oblong, oval, pointed, very smooth, finely serrate, oblique at the base; common foot-stalk prickly; capsules three, sessile:" a hardy shrub. April. North America. 1806. S.

Order Hexandria.

xiv. **SMI'LAX**, the *σμιλαξ* of the Greeks, but which name originally belonged to the Yew Tree; it is applied by Dioscorides to some climbing shrubs. Nat. ord. **Linn.** *Sarmentaceæ*. *Juss.* *Asparagi.* 41 Species.

* *Stem prickly, angular.*

1. *S. As'pera. Common Smilax, Rough Bind-weed.* "Stem angular, very prickly; leaves oblong, heart-shaped, somewhat halbert-shaped, with seven or nine ribs, leathery, bordered with spinous teeth;" stems climbing with tendrils; flowers white, in small umbellate tufts; berries of a dull scarlet red. September. Italy. 1648. S.

2. *S. Sarsaparil'la. Medicinal Smilax, or Sarsaparilla.* "Stem prickly, somewhat four cornered; leaves elliptic, pointed, abrupt, three ribbed, without prickles, slightly glaucous beneath;" stem stout, a little zigzag; leaf-stalks broad, short, channelled, each with two tendrils; flowers yellowish white, in axillary, solitary, stalked umbels; berries red. July, August. America. 1664. S.

** *Stem prickly, round.*

3. *S. Rotundifo'lia. Round-leaved Smilax.* "Stem prickly, round; leaves unarmed, heart-shaped, acuminate, five or seven nerved;" stem naked, zigzag; prickles few; leaves wider than long, on short stalks, with two thread-shaped tendrils. July, August. North America. 1760. S.

4. *S. Laurifo'lia. Laurel-leaved Smilax.* "Stem prickly, round; leaves unarmed, ovate, lanceolate, three nerved;" stem thick, taper, rising by tendrils to ten feet in height; leaves thick; flowers axillary, in

round bunches, succeeded by black berries. July.
North America. 1739. S.

5. S. Tamnoïdes. *Black bryony-leaved Smilax.*
" Stem prickly, round; leaves unarmed, heart-shaped, oblong, seven nerved;" stems taper; leaves four inches long, two and a half broad; flowers in long loose bunches, lateral; berries black. June, July. North America. 1739. S.

6. S. Cadu'ca. *Deciduous Smilax.* " Stem round, with distant, straight prickles; branches angular; leaves ovate, pointed, five ribbed; tendrils hair-like, shorter than the leaves;" stem rather stout; prickles stout, tipped with black; flowers few, greenish, on solitary umbels. June, July. Canada. 1759. S.

*** Stems without prickles, angular.

7. S. Bo'na Nox. *Ciliated Smilax.* " Stem unarmed, angular; leaves heart-shaped, ovate, acute, fringed, prickly, seven nerved." June, July. North America. 1739. S.

8. S. Herba'cea. *Herbaceous Smilax.* " Stem unarmed, angular, herbaceous; leaves ovate, acuminate, seven nerved; stalk of the umbel longer than the leaf;" stems brownish purple, annual, smooth, with a pair of tendrils to each leaf; umbels globular, of numerous flowers, on axillary stalks, near six inches long; berries dark purple, depressed. July. North America. 1690. P.

**** Stem without prickles, round.

9. S. Lanceola'ta. *Spear-leaved Smilax.* "Stem unarmed, round; leaves unarmed, lanceolate;" stem short, very branching, climbing with tendrils; leaves entire, smooth, three-nerved, alternate, long; flowers greenish white, in terminal tufts, succeeded by globular red berries, each containing a stone. June, North America. 1785. S.

This is a genus of chiefly climbing plants not remarkable for their beauty: a decoction of the branched roots of *S. Sarsaparilla* is in the highest estimation, for restoring a vitiated habit of body. Two species, seen sometimes in the Green-house, *S. China* and *S. Pseudo-China*, both called China Root, were supposed to partake of the same properties as *Sarsaparilla*, but which experience has not confirmed.

xv. TA'MUS, derivation unknown; sometimes written *Tamnus*. Nat. ord. *Linn.* *Sarmentaceæ.* *Juss. Asparagi.* 3 Species.

1. T. Commu'nis. *Common Black Bryony.* "Leaves heart-shaped, undivided;" stems herbaceous, branched, twining; leaves alternate, stalked, entire, acute, many ribbed; stipules small, awl-shaped; flowers in long greenish axillary clusters; berries oval, the size of a currant, bright red, insipid. The young sprouts may be eaten like *Asparagus*. May to August. Britain. P.

2. T. Cretica. *Creten Black Bryony.* "Leaves three lobed;" flowers in two clusters, one much longer. This plant differs little from the former. July. Candia. 1739. P.

xvi. DIOSCO'REA, a name from the Greek botanist Dioscorides, who flourished about the time of Nero. Nat. ord. Linn. Sarmentaceæ. Juss. Asparagi. 26 Species.

1. D. Villo'sa. *Hairy Dioscorea.* "Leaves alternate, opposite, whorled, heart-shaped, acute, nine nerved, downy beneath; stem roundish, smooth;" flowers in loose bunches, small, greenish white. August. North America. 1752. P.

This is a genus of chiefly tropical plants, not remarkable for beauty; with tuberous roots, esculent when boiled. The Yam, so much cultivated in the West Indies as food for the Negroes, is the root of D. Sativa, growing to a large size, esteemed to be easy of digestion, and not inferior to any known root, either in flavour or nutriment; it is used in much the same way as the common Potatoe.

Order Octandria.

xvii. PO'PULUS, from πολύς, many; on account of the multitude of its leaves. Nat. ord. Linn. and Juss. Amentaceæ. 13 Species.

1. P. Al'ba. *Great White Poplar, or Abele Tree.* "Leaves roundish, somewhat heart-shaped, lobed and toothed, downy and very white beneath;" a large

tree; with a smooth bark; branches horizontal; leaves alternate, upper side dark green; catkins an inch long; scales yellow. March, April. Britain. T.

2. P. Canescens. *Common White or Grey Poplar.* "Leaves roundish, deeply waved, toothed, grey and downy beneath; catkins cylindrical, lax :" a taller tree than the former; bark satiny; branches ascending; leaves less white, less deeply cut, scarcely more than half the size; catkins two inches long; scales brown. March, April. England. T.

3. P. Tremula. *Aspen or Trembling Poplar.* "Leaves nearly round, toothed, smooth on both sides; foot-stalks compressed; young branches hairy; stigmas four eared at the base :" a tall tree, in no part hoary, the long leaf-stalks cause the leaves to tremble with every breath of wind; catkins two inches long, very hairy; scales brown. March, April. Britain. T.

4. P. Læviga'ta. *Smooth Poplar Tree.* "Leaves roundish, ovate, acuminate, somewhat heart-shaped, unequally serrate, smooth, three nerved; leaf-stalks compressed; branches round, smooth :" a tallish tree. March, April. North America. 1769. T.

5. P. Græ'ca. *Athenian Poplar Tree.* "Leaves roundish, ovate, acute, slightly heart-shaped, serrate, smooth, somewhat fringed at the margin; leaf-stalks compressed; branches round, smooth :" a tallish tree. March, April. Isles of the Archipelago. 1779. T.

6. P. Ni'gra. *Black Poplar Tree.* "Leaves

deltoid, more long than wide, pointed, serrate, smooth on both sides; catkins cylindrical, lax, long; stigmas four;" a large spreading tree; leaf-stalks half the length of the deep green leaves; bark ash-coloured; stamens sixteen. March, April. Britain. T.

7. P. Dilata'ta. *Lombardy or Po Poplar Tree.* "Leaves deltoid, more wide than long, acuminate, serrate, smooth on both sides;" a tall tree, of conical growth. It is difficult to find a specific difference from the last, and by some botanists it is thought merely a variety: the female tree is only known in England. March, April. Italy. 1758. T.

8. P. Monili'fera. *Canadian Poplar Tree.* "Leaves somewhat heart-shaped, smooth, glandular at the base; serratures horny, hooked, somewhat hairy; nerves spreading; leaf-stalks compressed; branches round;" a large and hardy tree, thriving on a poor sandy soil; the down of the seeds on the female tree is so copious as to become a nuisance near houses, sticking to clothes in a very troublesome manner. May. Canada. 1772. T.

9. P. Angula'ta. *Carolina Poplar Tree.* "Leaves heart-shaped, deltoid, acuminate, with obtuse hooked teeth; branches angular, winged;" a considerable tree; young branches with a greenish bark; leaves very large. March. Carolina. 1738. P.

10. P. Balsami'fera. *Common Tacamahac Poplar Tree.* "Leaves ovate, acuminate, with adpressed serratures, white beneath, with netted veins; buds

"resinous;" a small tree, bark smooth; leaves about four inches long, stalked; stamens numerous; catkins long. April. North America and Siberia. 1692. T.

11. P. Can'dicans. *Heart-leaved Tacamahac Poplar Tree.* "Leaves heart-shaped, ovate, acuminate, obtusely and unequally serrate, white beneath, commonly three nerved, with netted veins; buds resinous;" differing but little from the last except in the form of the leaves. March. Canada. 1772. T.

12. P. Heterophyl'la. *Various-leaved Poplar Tree.* "Leaves heart-shaped, roundish, ovate, obtuse, with hooked teeth; the younger leaves woolly beneath;" a large tree; branches numerous, veined; leaves broad; flowers in loose catkins. April, May. North America. 1785. T.

This is a genus of lofty trees of quick growth and ample shade; their wood, though not of the highest value, is yet estimable for many purposes, that of the White Poplar makes butchers' trays, packing cases, wheel-barrows, &c. and is cut into planks for floors and wainscoting, that of the Black Poplar is in great request for articles of turnery, and in Flanders for wooden shoes, where a prodigious quantity is manufactured; the buds of both these sorts will yield, when pressed, a fragrant resinous substance, but not of so powerful a nature as that from the Tacamahac Poplar. This latter tree exudes from its buds a glutinous yellow balsam, which often collects into drops, this substance is chiefly used in warm plaisters. The Lombardy Poplar, now so common, was brought over from Italy by Lord Rochford in his travelling carriage, scarcely more than

fifty years ago, it is singular amongst deciduous trees for its conical growth, resembling the Cypress; planted two or three together it has a good effect in plantations, one beauty it possesses of waving its whole length when agitated by the wind.

XVIII. RHODI'OLA, diminutive of *rodos*, a rose, the root possessing somewhat the fragrant smell of that flower. Nat. ord. *Linn.* Succulentæ. *Juss.* Semper-vivæ. 1 Species.

1. *R. Ro'sea*. *Rose Root*. Root fleshy, whitish, when dried fragrant; stems simple, a span high, thickly beset with leaves, which are tiled, sessile, fleshy, obovate, toothed towards the top, in the male plant tipped with red; cyme terminal, sessile; composed of numerous yellow flowers, the female dotted with red. May to July. Britain. T.

Order Enneandria.

XIX. MERCURIA'LIS, from *Mercury*, the reputed discoverer of this plant. Nat. ord. *Linn.* Tricoccæ. *Juss.* Euphorbiæ. 6 Species.

1. *M. Peren'nis*. *Perennial Mercury*. "Stem quite simple; leaves rough; root creeping;" herb fetid, dark green, a foot and a half high; leaves opposite, stalked, ovate, acute, hairy; flowers green, always dioecious, in axillary, stalked, upright clus-

ters ; capsule rough with hairs. April, May. Britain. P.

2. M. An'nua. *Annual or French Mercury.* " Stem cross branched ; leaves ovate, smooth ; flowers in bunches ; root fibrous ;" stem bushy ; leaves stalked, ovate, acute, serrate ; herb of a deep shining green, smelling disagreeably, something like Elder ; flowers nearly the same as in the last, a few males on the female plants, and *vice versa*. M. Ambigua seems to be a variety, with flowers monœcious, in axillary tufts. July to September. Britain. A.

3. M. Tomento'sa. *Downy Mercury.* " Whole plant finely downy and hoary ; stem somewhat shrubby ; leaves oblong, more or less serrate ;" flowers in the male plant in small round heads ; female flowers solitary. July to September. Spain. 1640. S.

These weed-like plants were formerly in estimation as pot herbs, they are now however considered to possess very noxious qualities ; the second species is applied to medical uses in France, and is supposed to have been introduced here from that country.

Order Decandria.

XX. GYMNOCLA'DUS, from *γυμνός*, naked, and *κλάδος*, a slender branch, in allusion to the seemingly dead appearance of its branches in winter. Nat. ord. Linn. Lomentaceæ. Juss. Leguminosæ. 1 Species.

1. G. Canaden'sis. *Canadian Gymnocladus, or Hardy Bonduc.* A straight handsome tree, with a

fine leafy top in summer; leaves very large, doubly pinnate; leaflets ovate, slightly stalked, acute, veiny, slightly downy; flowers in terminal, dense, rather compound bunches, whitish, minutely downy, legumes four or five inches long, thick and fleshy; it does not blossom in England. Canada. 1748. T.

XXI. SCHINUS, from σχίζειν, to cleave. Nat. ord. Linn. Dumasæ. Juss. Terebintaceæ. 3 Species.

1. S. Molle. *Peruvian Mastic Tree.* "Leaves pinnate, serrate, or entire;" stem shrubby; leaves alternate, elegant, evergreen; leaflets ovate, lanceolate; flowers small, yellowish, green, in compound axillary panicles; berries rose-coloured. July, August. 1597. T. Gr. Ho.

2. S. Depen'dens. *Entire simple-leaved Schinus.* "Leaves simple, entire, undivided or three-cleft; flowers mostly octandrous;" a tree differing widely from the former in its simple leaves; clusters simple, axillary, aggregate, rather longer than the foliage; flowers yellowish white, four-cleft. May to July. Chili. 1790. T.

XXII. CORIA'RIA, from *corium*, leather, it being used in tanning hides. Nat. ord. not determined. 5 Species.

1. C. Myrtifolia. *Myrtle-leaved Sumach.* "Leaves ovate, lanceolate, three nerved, stalked;" a shrub four or five feet high; stems smooth, ash-coloured;

branches opposite, loose, flexible, young ones four-sided; leaves opposite, entire, smooth, green on both sides; cluster of flowers simple, terminating, pale green; flowers sometimes perfect, sometimes monœcious. This plant is astringent, it is used not only in tanning leather but in dyeing black colours. May to August. Spain. 1629. S.

XXIII. MENISPER'MUM, from μην, the moon, and σπέρμα, seed, in allusion to the crescent-like form of the seed. Nat. ord. Linn. Sarmentaceæ. Juss. Menisperma. 19 Species.

Order Dodecandria.

1. M. Canaden'se. *Canadian Moon Seed.* "Leaves peltate, heart-shaped, rounded and angular; clusters compound, drooping;" stem somewhat shrubby, twining contrary to the sun's apparent motion, leafy; leaves on long stalks; upper side dark green, glaucous beneath; panicles in pairs, shorter than the leaves; flowers greenish white; berries black. June, July. North America. 1691. S.

2. M. Virgi'nicum. *Virginian Moon Seed.* "Upper leaves ovate, undivided; lower leaves three lobed, wavy; clusters simple, solitary, erect;" stems round; slender, twining; leaves alternate, the form, colour, and consistency of Ivy leaves; flowers white, in small naked, axillary clusters; berries black. July. North America. 1732. S.

..3. M. Caroli'num. *Carolina Moon Seed.* "Leaves heart-shaped, roughish above, downy beneath; clusters cymose;" stems herbaceous; leaves entire, hairy, half the size of the last; clusters nearly as long as the leaves, hairy, of numerous small whitish flowers; berries red. June, July. Carolina. 1759. S.

These plants are preserved chiefly in botanic gardens, having little beauty to recommend them to general favour: one species, M. Coccus, produces the berry called **Coccus Indicus**, used in India for intoxicating fish, and in England for adulterating spirits and beer.

xxiv. DATIS'CA, derivation not known. Nat. ord. not determined. 2 Species.

1. D. Canna'bina. *Smooth-stalked Bastard Hemp.* "Stems smooth," several, about four feet high; leaves pinnate, alternate; leaflets three pair, with an odd one, serrate, of a light green; flowers in loose spikes, apetalous; the long anthers of the male flowers giving them a yellow appearance. July to September. Isle of Candia. 1640. P.

Order Monadelphia.

xxv. JUNI'PERUS, from *Junius*, the month June, and *fero*, to bear, its berries being at that season formed. Nat. ord. *Linn.* and *Juss.* *Coniferæ.* 14 Species.

1. J. Thuri'fera. *Spanish Juniper.* "Leaves acute, tiled, in four rows :" a tree about twenty-five

feet high, forming a sort of pyramid by sending out many branches; berries very large, black when ripe.

May, June. South of Europe. 1752. E. T.

2. J. Bermudia'na. *Bermudas Cedar or Juniper.*
"Lower leaves in threes, upper leaves in pairs, decurrent, awl-shaped, spreading, acute;" a handsome tree; berries produced towards the end of the branches, dark red: the wood has a strong odour, formerly in much estimation for wainscoting and furniture. May, June. Bermudas. 1683. E. T.

3. J. Sabi'na. *Common Savine.* "Leaves opposite, obtuse, glandular in the middle, tiled, in four rows; the younger leaves acute, opposite; stem shrubby," about six feet high; branches erect; berries numerous. Var. 1. J. Tamariscifolia, *Tamarix-leaved Savine*, a yard high, with spreading branches; berries smaller, but not often produced in England. May, June. The Levant. 1548. E. S.

4. J. Virginia'na. *Virginian Red Cedar or Juniper.*
"Leaves in threes, joined at the base, the younger ones tiled, the older spreading;" a very large tree; bark reddish brown, appearing twisted; the wood of a powerful fragrance. May, June. North America. 1664. E. T.

5. J. Commu'nis. *Common Juniper.* "Leaves three together, spreading, dagger-pointed, longer than the berry;" a shrub commonly about three feet high, but will sometimes reach ten; branches spreading, tough, purplish; leaves narrow, awl-shaped, bright

green on one side, grey on the other; berries when ripe of a dark purple colour. Var. 1. *Swedish or Tree Juniper*, from ten to sixteen feet high; branches more erect; berries longer; native of Sweden. 2. *Mountain Juniper*, leaves broader, thicker; berries rather oval. May. Britain. E. S.

6. J. Oxye'drus. *Brown-berried Juniper*. "Leaves in threes, spreading, dagger-pointed, shorter than the berry;" stem ten or twelve feet high, branched the whole length; branches small and taper, without angles; leaves small, obtuse; berries brownish red, the size of a Hazel-nut. May, June. 1739. Spain. E. T.

7. J. Phœni'cea. *Phœnician Cedar or Juniper*. "Leaves in threes, very minute, obtuse, tiled :" a tree about twenty feet high, growing with its branches in a pyramidal form; flowers sometimes monoecious; berries pale yellow, the size of those of the Common Juniper. May, June. The Levant. 1683. E. T.

8. J. Ly'cia. *Lycian Cedar or Juniper*. "Leaves in threes, tiled on all sides, ovate, obtuse :" a small tree, branches erect; bark reddish brown; leaves small; berries large, oval, brown; wood fragrant, perhaps only a variety of the last; it is difficult to distinguish it from Savine; its shoots are thick, and the leaflets less clustered. May, June. The Levant. 1693. E. T.

9. J. Da'u'rica. *Siberian Juniper*. "Leaves opposite, acute, tiled, decurrent, spreading, awl-shaped;" stem shrubby, thick; branches thick, scaly;

shoots green, forked, tiled with leaves in cross pairs, of a glaucous hue; leaves in the older branches changing into acute scales. June to August. Dauria. 1791. E. S.

The utility of some of the species of Juniper is considerable; the berries of the common sort are well known for imparting an essential oil to distilled spirits, which become geneva, or common gin. The gum resin Olibanum is extracted from the Lycian Cedar, it is supposed to have been used by the ancients in their sacrifices, as it is still employed in Catholic countries in their religious ceremonies for incense. The Common Savine is sufficiently known as a popular medicine in some female complaints. The wood of *J. Oxycedrus* is supposed to have been the Cedar famous for its durability, and of which statues were formed before the use of marble was introduced. The Red Cedar, *J. Virginiana*, produces the wood of which black-lead pencils are made; it is much used in cabinet work, and is valuable for ship building, as no worm will touch it.

XXVI. TAX'US, from τοξον, a bow, arrow, or dart, the wood having been used for these weapons. Nat. ord. Linn. and Juss. Coniferæ. 10 Species.

1. T. Bacca'ta. *Common Yew.* "Leaves linear, two ranked, crowded, nearly flat; male flowers globular;" a moderate sized tree; trunk straight, with a smooth deciduous bark; branches spreading horizontally in two directions; leaves crowded, spreading in two rows, nearly sessile, linear, entire, slightly re-

volute, of a dark shining green; flowers axillary scattered, sessile, male sulphur-coloured, without calyx, the female with a small green calyx, which at length becomes a berry of a bright scarlet, open at top. February to April. Britain. E. T.

The Yew was formerly planted in church yards, either from a superstitious motive, or as a symbol of immortality, being an evergreen; some say it was to provide wood for bows for the use of the parish: the wood is very hard and smooth, red and veined, it is used for cogs of mills, axle-trees, and other purposes where durability is required; this was the favourite tree for clipping into any fantastic shape, for which art our old gardeners so much valued themselves: it is thought highly dangerous to sleep under its shade; its leaves are certainly poisonous to cattle, as is a decoction of them to the human race; the berries are not esteemed noxious.

XXVII. EPHE'DRA, derived by Linnaeus from εφεδρα, by, and νωρ, water, expressive of its place of growth. Nat. ord. Linn. and Juss. Coniferæ. 5 Species.

1. E. Dysta'chya. *Great Shrubby Horse Tail, or Sea-side Grape.* "Flower-stalks opposite; catkins in pairs;" a bushy, smooth, leafless shrub, always green, with the habit of an *Equisetum*; stems cylindrical, jointed, one to three feet high; catkins yellowish; berries scarlet, sweetish, viscid, eatable but not agreeable. There is a variety, E. Monostachya, with the catkins solitary, a smaller plant. June, July. Spain. 1570. E. S.

XXVIII. *Ruscus*, possibly from *russus*, red, the colour of the fruit. Nat. ord. Linn. Sarmentaceæ.
Juss. Asparagi. 7 Species.

1. *R. Aculeatus.* *Prickly Butcher's Broom.* "Leaves sharply pointed, flowering on the upper side, naked;" plant herbaceous, but firm and rigid; stem about two feet high, branched, rather spreading; leaves alternate, spreading every way, hard, ovate, entire, tipped with a sharp thorn, and bearing a solitary pale flower on the middle of their upper side; nectary purplish; berry scarlet, the size of a black currant. Var. 1. Branches more lax; leaves tapering at both ends. December to June. England. E. S.

2. *R. Hypophyllum.* *Broad-leaved Butcher's Broom.* "Leaves flowering on the under side, naked;" stem not branched; leaves larger than the last, more elliptical, with an acute but not spinous point, each leaf bearing from the middle of its under side a pair of stalked pendulous flowers; berries red. May, June. Italy. 1640. E. S.

3. *R. Hypoglossum.* *Double-leaved Butcher's Broom.* "Leaves flowering on the upper side, under a leaflet;" stems simple, a foot high, with the habit of the last species; leaves narrower, distinguished by a little leaflet on the surface, from which proceeds a solitary flower, stalked, pale green, with a slender, purplish, curved nectary; berries red. April, May. Hungary. 1596. E. S.

4. *R. Racemosus.* *Alexandrian Laurel, or Clus.*

tered Butcher's Broom. "Stem erect, branched; cluster terminal; flowers perfect;" stems bushy, from two to four feet high; leaves sessile, lanceolate, twisted, of a bright and polished green; flowers pale buff coloured, with both stamens and pistil in each flower; berries orange-coloured. June. Portugal.
1713. E. S.

The first three species of this genus are remarkable for bearing their flowers from the bosom of the leaf, on a flower-stalk indeed, but which is concealed under the cuticle, from whence it may with care be dissected. In Italy the green shoots are made into besoms, and sold to the butchers for sweeping their blocks.

CLASS XXIII.

POLYGAMIA.

Order Monoecia.

I. **MUSA.** Calyx a many-flowered sheath of one leaf; petal of the corolla one, strap-shaped, five toothed; nectary of one leaf, opposite to the petal; berry inferior, with many seeds; most of the stamens abortive in some flowers; pistil abortive in the others.

II. **HOLCUS.** Perfect flower, calyx two valved, one or two flowered; corolla two valved, inner valve awned; stamens three; styles two; seed one. Male, calyx two valved; corolla none, or sometimes two valved; stamens three.

III. **VALANTIA.** Perfect flower, calyx none; corolla four parted; stamens four; style two cleft; seed one. Male, calyx none; corolla three or four parted; stamens three or four; pistil indistinct.

IV. **CELTIS.** Perfect flower, calyx five parted; corolla none; stamens five; styles two; drupe one seeded. Male, calyx six parted; corolla none; stamens six.

V. **VERATRUM.** Perfect flower, calyx none; corolla six petalled; stamens six; pistils three; capsules three, many seeded. Male, calyx none; corolla six petalled; stamens six, with the rudiments of a pistil.

VI. ACER. Perfect flower, calyx five cleft; corolla five petalled; stamens eight; pistil one; capsules two or three, with one seed in each, terminated by a wing. Male, calyx and corolla as in the perfect flower; stamens eight, without germ or style.

VII. AILANTHUS. Perfect flower, calyx five parted; corolla five petalled; stamens two, or three; germs three or five; styles lateral; capsules one seeded. Male, calyx and corolla as in the perfect flower; stamens ten. Female, calyx and corolla as in the male; germs three to five; styles lateral; capsules one seeded.

VIII. MIMOSA. Perfect flower, calyx five toothed; corolla five toothed, or none; stamens eight; pistil one; legume splitting into one-seeded joints. Male, calyx, corolla, and stamens as in the perfect flower.

IX. ACACIA. Perfect flower, calyx five toothed; corolla five cleft, or five petalled; stamens four to a hundred, pistil one; legume two valved. Male, calyx, corolla, and stamens as in the perfect flower.

X. PARIETARIA. Perfect flower, calyx four cleft; corolla none; stamens four; style one; seed one. Female, calyx and corolla as in the perfect flower; style one; seed one.

XI. ATRIPLEX. Perfect flower, calyx five leaved; corolla none; stamens five; style two parted; seed one, depressed. Female, calyx two leaved; corolla none; stamens none; style two parted; seed one, compressed.

Order Dioecia.

XII. PANAX. Perfect flower, umbel of many rays; **calyx** five toothed, superior; corolla five petalled; **stamens** five; styles two; berry two seeded, inferior. **Male**, umbel more globose; calyx entire; corolla five petalled; stamens five.

XIII. DIOSPYROS. Perfect flower, calyx four cleft; corolla pitcher-shaped, four cleft; stamens eight; style four cleft; berry eight seeded. **Male**, **calyx**, **corolla**, and **stamens** as in the perfect flower.

XIV. NYSSA. Perfect flower, calyx five parted; **corolla** none; **stamens** five; pistil one; drupe inferior. **Male**, calyx five parted; **corolla** none; **stamens** ten.

XV. FRAXINUS. Perfect flower, calyx none, or deeply four-cleft; **corolla** none, or four petalled; **stamens** two; pistil one; capsule ovate, oblong, one seeded. **Female**, **calyx**, **corolla**, and **capsule** as in the perfect flower; pistil one.

XVI. GLEDITSCHIA. Perfect flower, calyx four cleft; **corolla** four petalled; **stamens** six; pistil one; legume flat, divided. **Male**, calyx three leaved; **corolla** three petalled; **stamens** six. **Female**, **calyx** five leaved; **corolla** five petalled; pistil one; legume flat, divided.

XVII. CERATONIA. Perfect flower, calyx five parted; **corolla** none; **stamens** five; style thread-shaped; legume leathery, many seeded. **Male**, **calyx** five parted; **corolla** none; **stamens** five. **Female**,

calyx five parted; corolla none; style one; legume leathery, many seeded.

XVIII. FICUS. Common receptacle (or the fruit) top-shaped, fleshy, closed, lined internally with separate florets. Male, calyx in three deep segments; corolla none. Female, calyx in five deep segments; corolla none; pistil one; seed one.



CLASS XXIII.

POLYGAMIA.

Order Monoecia.

I. MU'SA, from Antonius Musa, the physician of Augustus. Nat. ord. Linn. Scitamineæ. Juss. Musæ. 6 Species.

1. M. Paradisi'aca. *Plantain Tree.* "Flower-stalk drooping; male flowers permanent; fruit oblong;" stems erect, unbranched, twelve feet high, round, spongy; leaves numerous about the top of the stem, oblong, entire, several feet long, and one broad; flower-stalk terminal, solitary, bearing numerous alternate tufts of flowers, often striped with red, each tuft from a purple sheath; fruit eight or nine inches long, somewhat angular. M. Sapientum, *the Banana Tree*, with oval fruit, is now considered only as a va-

riety. October to December. Both Indies. 1690.

S. Hot Ho.

This plant is cultivated every where within the tropics for the sake of its fruit, which makes a principal part of the vegetable food of the inhabitants, eaten raw when ripe, or roasted when fully grown, but not ripe.

II. HOL'CUS, from ὄλχος, a furrow, it being cultivated. Nat. ord. Linn. and Juss. Gramina. 28 Species.

1. H. Sor'ghum. *Indian Holcus, Indian Millet.* "Panicle ovate, erect, compact; chaffs downy; seeds slightly compressed;" stem erect, round, jointed, leafy, from six to ten feet high; leaves reed-like, lanceolate; panicle four to twelve inches long, branched; flowers very numerous; seeds roundish, yellow or red. July. India. 1596. A. Hot Ho.

The seeds of this grass are much used in India for fattening poultry, and in the West Indies they are esteemed a hearty food for the Negroes, it is there called Guinea Grass or Corn, and is much cultivated; in the Levant bread is made of it, and sugar may be extracted from the stem.

III. VALAN'TIA, in honour of Sebastian Vaillant, a distinguished French botanist, died 1722. Nat. ord. Linn. Stellatae. Juss. Rubiaceae. 12 Species.

1. V. Crucia'ta. *Cross Wort.* "Male flowers four cleft; peduncles two leaved;" leaves four together, ovate, oblong, three nerved, netted, hairy; flower-

stalks branched, smooth; flowers axillary, corymbose, golden; seed smooth. May to July. Britain. P.

This plant resembles Galium, and by many botanists is referred to that genus. Some other species of Valantia may occasionally be found in botanic gardens, but being inconspicuous plants, they are but little attended to.

iv. CEL'TIS, a name in Pliny, derivation not known. Nat. ord. Linn. Scabridæ. Juss. Amentaceæ.

15 Species.

1. C. Austra'lis. *Europæan Nettle Tree.* "Leaves oblong, lanceolate, acuminate, sharply serrate, rough above, softly downy beneath, unequal at the base;" a tree forty feet high; branches numerous, spreading, flexible; leaves four inches long; flowers axillary along the branches, greenish white; fruit the size of a small cherry, blackish, eaten only by birds; wood very hard. May. South of Europe. 1596. T.

2. C. Tournefor'tii. *Oriental Nettle Tree.* "Leaves ovate, acute, serrate, unequal at the base, roughish above; the younger leaves somewhat heart-shaped;" stem twenty feet high, branched; branches smooth, cylindrical; leaves two inches long, a little fleshy; fruit smooth, round, yellow, tending to brown, the size of a pea. May. The Levant. 1739. T.

3. C. Occidenta'lis. *American Nettle Tree.* "Leaves ovate, acuminate, serrate, unequal at the base, rough above, hairy beneath;" a tall tree; branches spreading; leaves alternate, on long stalks,

broadest and shorter than those of the first species; fruit oval, smaller, of a deep purple, sweetish; flowers on long stalks opposite the leaves. April, May.
North America. 1656. T.

v. *VERA'TRUM*, from *vere atrum*, truly black, such being the colour of the root in one species. Nat. ord. *Linn. Coronariæ. Juss. Junci.* 6 Species,

1. *V. Al'bum. White Veratrum, Common White Hellebore.* "Panicle thrice compound; petals ascending, elliptical;" root tuberous; stem from two to five feet high, erect, leafy; panicle terminating, of innumerable greenish white flowers; leaves large, elliptical, entire, ribbed. June to August. Europe. 1548. P.

2. *V. Vi'ride. Green Veratrum.* "Spike panicled, dense, cylindrical; petals ascending, elliptical;" stem from three to six feet high, with the foliage and habit of the last; panicle larger, greener, more spike-like; the flowers being nearly sessile; petals mealy about the base. July, August. North America. 1742. P.

3. *V. Virgi'nicum. Virginian Veratrum.* "Clusters panicled, loose; petals elliptic, spreading, with two spots at the base, hairy at the back;" stem from three to five feet high, downy; leaves linear, lanceolate, folded, ribbed, pointed; panicle pyramidal, of numerous many flowered branches; flowers green, turning to a red brown. June, July. North America. 1768. P.

4. V. Ni'grum. *Dark-flowered Veratrum.* "Clusters panicled, dense, cylindrical; petals obovate, widely spreading, at length reflexed;" stem from three to six feet high, leafy; flowers of a dark purplish brown, almost black, exhaling a cadaverous scent, in long, cylindrical, sessile clusters, assembled into a long panicle. June, July. Austria. 1598. P.

Every part of the White Hellebore is extremely acrid and poisonous, particularly the root, yet it has been successfully administered in mania, epilepsy, and eruptions of the skin from very early times.

VI. A'cer, from *acris*, on account of the hardness of the wood. Nat. ord. Linn. *Tribilatae*. Juss. *Aceri*. 24 Species.

1. A. Heterophyl'lum. *Evergreen Maple.* "Leaves evergreen, ovate, entire, three lobed, indistinctly serrate, smooth :" a tree about twenty feet high; the leaves of the colour and consistence of Box. Perhaps it is only a variety of A. Creticum. May, June. The Levant. 1759. E. T.

2. A. Tata'ricum. *Tartarian Maple.* "Leaves heart-shaped, unequally serrate, somewhat cut; corymbs erect :" a tree twenty feet high; leaves opposite; flowers in terminating corymbs, twenty to thirty in each, half males and half perfect ones; corolla white; filaments longer than the corolla. May, June. Tartary. 1759. T.

3. A. Pseu'do-Pla'tanus. *Greater Maple Sycamore.*

"Leaves five lobed, unequally toothed, glaucous, smooth beneath; clusters pendulous;" a very tall tree, commonly with a clean straight trunk and spreading top; leaves with three large lobes and two small ones; flowers yellowish green. April, May. Britain. T.

4. A. Ru'brum. *Scarlet-flowered Maple.* "Leaves somewhat five lobed, acute, serrate, glaucous beneath; flowers umbellate, erect; germs smooth;" a tree about twenty feet high; leaves of the male tree cut to the base, so that it might be taken for a different species; flowers scarlet, appearing before the leaves; stamens six. Nurserymen have a variety called *Sir Charles Wager's Maple*, with woolly germs, by some made a distinct species under the name of A. Dasy-carpum. April, May. Virginia. 1656. T.

5. A. Sacchari'num. *Sugar Maple.* "Leaves five lobed, acuminate, somewhat toothed, downy beneath; corymbs lax, nodding; flower-stalks hairy;" a tree forty feet high; leaves deeply divided and veined; flowers without petals. May. Pennsylvania. 1735. T.

6. A. Platanoi'des. *Norway Maple.* "Leaves five lobed, smooth on both sides; lobes toothed, acuminate; corymba erect; flower-stalks smooth;" a tall tree; leaves of a shining green, larger than those of Sycamore; flowers of a fine yellow. There is a variety with the leaves jagged. May to July. Europe. 1683. T.

7. A. Monta'num. *Mountain Maple.* "Leaves somewhat five lobed, acute, serrate, downy beneath; clusters compound, erect:" a small tree; leaves four inches and a half long, scarcely three broad, veined, wrinkled, bright green above, paler beneath; flowers yellow; calyx rose coloured at the end, hairy. April, May. North America. 1750. T.

8. A. Campes'tre. *Common Maple.* "Leaves five lobed, entire; lobes obtuse, larger, somewhat sinuate; corymbs erect:" a tree from ten to twenty feet high; bark rough; leaves in pairs, on long stalks; flowers greenish in thin loose short clusters; stamens yellow. May, June. Britain. T.

9. A. O'palus. *Italian Maple.* "Leaves somewhat round, slightly five lobed, obtuse, obtusely serrate; corymbs lax, erect:" a lofty tree with a spreading head; leaves large; flowers in very loose pendant clusters; petals yellow, veined. May, June. Italy. 1752. T.

10. A. Monspessula'num. *Montpelier Maple.* "Leaves annual, three lobed, entire; lobes equal; younger leaves angular, toothed; corymbs few flowered, erect:" a tree about twenty feet high; leaves like those of the Common Maple, but thicker, not so large, of a shining green. May. South of France. 1739. T.

11. A. Cre'ticum. *Cretan Maple.* "Leaves perennial, wedge-shaped, three lobed, entire; lateral lobes shorter; corymbs few flowered, erect:" a tree

about twenty feet high ; leaves somewhat resembling Ivy leaves, but thinner; stalks downy. May, June.
The Levant. 1752. T.

12. A. Negun'do. *Ash-leaved Maple.* "Leaves pinnate or ternate, unequally serrate; flowers diœcious :" a very tall tree; leaves pale green. April.
North America. 1688. T.

The genus *Acer* consists entirely of trees affording a thick shade, many of them yielding a saccharine juice from the trunk and branches, which is procured by the inserting of a tap. The Sugar Maple in America is exceedingly valuable for this purpose, a sugar being prepared from the juice equal to that of the sugar cane. Common Sycamore produces the same sort of juice, but in a smaller quantity. This latter tree thrives well near the sea. The wood both of Sycamore and the Common Maple is valuable for various purposes of turnery, such as bowls and cups; it is also esteemed by cabinet makers for inlaying.

VII. AILAN'THUS, from the Amboina name *Aylanto*, which signifies the tree of heaven, so called from its lofty growth. Nat. ord. not ascertained.
2 Species.

1. A. Glandulo'sa. *Chinese Ailanthus.* "Leaves unequally pinnate; leaflets toothed at the base; teeth glandulous :" a tree forty or fifty feet high; bark grey; young twigs covered with a fine velvet down; leaves large, smooth, alternate; leaflets twenty to thirty; flowers very numerous, in a close terminating

panicle, exhaling a disagreeable odour. August. China. 1751. T.

VIII. MIMO'SA, from *Mimus*, an actor, it being a sort of imitative plant. Nat. ord. *Linn.* Lomentaceæ. *Juss.* Leguminosæ. 32 Species.

1. *M. Pudi'ca*. *Common Sensitive Plant, Humble Plant.* " Stem prickly; leaves somewhat digitate, pinnate; stem hairy; legumes jointed, fringed;" leaflets very numerous, oblong, obliquely elliptic, rather bristly, with a tumid pulpy texture at their base; flowers pale purple, in round, axillary, stalked tufts; legumes of three or four fringed joints. April to September. Brazil. 1638. A. Hot Ho.

2. *M. Sensiti'va*. *Broad-leaved Sensitive Plant.* " Stem and leaf stalks prickly; leaves conjugate, each with two pair of leaflets, half ovate, the innermost very small; petals none;" leaflets much larger than in the last, with the same tumid pulpy texture at the base; flowers in globular dense heads, stalked; legume bristly, downy. It is said to be no longer found in English collections. April to September. Brazil. 1648. B. Hot Ho.

This very numerous genus as it stood in Linnaeus is now subdivided. Those plants having a jointed legume and irritable leaves, retaining their original name; another section, with legumes cylindrical and leaves not irritable, forms the next genus *Acacia*. The Common Sen-

sitive plant is in high estimation on account of the singular sensibility lodged in the leaves; when touched or shaken either by the hand or a stick, or by the least wind blowing upon them, the leaflets suddenly close, and the foot-stalks fall down; the periods of time which they require to recover themselves vary from ten minutes to an hour, according to the vigour of the plant and the temperature of the stove.

IX. ACACIA, from ἀκάσιος, to point, on account of its thorns. Nat. ord. LINN. Lomentaceæ. Juss. Leguminosæ. 102 Species.

1. A. Ve'ra. *Egyptian Thorn.* "Spines in the place of stipules, twin, spreading; leaves twice pinnate, with glands on their common stalk; heads of flowers on downy stalks, several together;" leaflets roundish; flowers yellow. July. Arabia and Egypt.
1596. T. Hot Ho.

2. A. Julibris'sin. *Smooth Tree Acacia.* "Unarmed; leaves twice pinnate; leaflets acute; spikes somewhat globular, terminal, aggregate; legumes flat, membranous, smooth;" a moderate sized tree, with a smooth ash-coloured bark; branches as it were in whorls; leaflets eight to twelve pair; flowers all perfect, whitish. August. The Levant. 1745. T.

3. A. Pubes'cens. *Hairy-stemmed Acacia.* "Unarmed; branches hairy; leaves doubly pinnate, without glands; leaflets numerous, crowded; heads of flowers numerous, in long axillary clusters;" foliage

rich, downy; flowers copious, golden. March to June. New South Wales. 1790. S. Gr. Ho.

It is doubtful whether the first species, which is the *Mimosa Nilotica* of Linnæus, be the plant which produces the gum arabic: it is probable that several species exude this substance, and also the gum senegal, from the bark, either naturally or by incision.

X. PARIETARIA, from *paries*, a wall, in allusion to the place of its growth. Nat. ord. *Linn.* Scabridæ. Juss. Urticæ. 13 Species.

1. *P. Officinalis*. *Pellitory of the Wall.* "Leaves lanceolate, ovate, without lateral ribs at their base; segments of the involucre ovate; stem ascending," branched, spreading, reddish, shining, leafy; juicy, generally growing on old stone walls; leaves dark green, with pellucid dots; florets all fertile, greenish. June to September. Britain. P.

2. *P. Judaica*. *Basil-leaved Pellitory.* "Leaves ovate; stem ascending;" very similar in habit to the last, but differs in having shorter stalks and smaller oval leaves; flowers in rather smaller clusters. June to September. Germany. 1728. P.

Common Pellitory was once an article of the *Materia Medica*, it contains a considerable quantity of nitre, and is considered as an useful diuretic in calculous disorders. The plants of this genus are rarely seen in gardens.

XI. A'TRIPLEX, from *ater*, black, on account of

the dark colour of some of the species. Nat. ord.

Linn. Holoraceæ. *Juss.* Atriplices. 28 Species.

1. *A. Halimus.* *Tall Shrubby Orache, or Spanish Sea Purslane.* " Stem shrubby; leaves alternate or opposite, oblong, entire, rhomb-shaped;" stem from four to six feet high, with many thick, woody, brittle branches; leaves scattered, on long stalks, thick, succulent, shining, sourish; flowers small, purplish, at the ends of the branches. July, August. Spain.
1640. S.

2. *A. Hortensis.* *Garden Orache.* " Stem erect, herbaceous; leaves triangular, toothed;" stem about three feet high; leaves thick, pale green, glaucous, and various in form, heart-shaped, sinuate, serrate, or deltoid, slightly acid; valves of the calyx ovate, cordate, streaked. Var. 1. The plant of a deep green. 2. Very dark purple. 3. With green leaves, having a purple border. July, August. Tartary.
1548. A.

Garden Orache was formerly cultivated as a culinary pot herb, being used as Spinach, and it is still in some request with the French. The purple variety is frequently seen in gardens as an ornamental plant, the remaining species are rejected as rank and disagreeable weeds.

Order Dioecia.

XII. *PA'NAX*, from πάνας, all, and ἀκος, a medicine, it being a great restorative. Nat. ord. *Linn.* Umbellatae. *Juss.* Umbelliferae. 9 Species.

1. *P. Quinquefolium*. *Gin-seng*. "Leaves three together, quinate; leaflets stalked; stem herbaceous;" root spindle-shaped, yellowish, mucilaginous, slightly aromatic; stem erect, scored, simple; leaflets obovate, pointed, serrate, smooth, veiny; flower-stalk terminal, bearing an umbel of several small white flowers, each flower succeeded by a scarlet berry. *P. Trifolium*, with ternate leaves, a smaller plant, seems to be merely a variety. June. China and North America. 1740. P.

The Chinese, probably on account of its scarcity, have an extraordinary opinion of the virtue of this root, so that it sells for many times its weight in silver. The Americans, on the contrary, disregard it because it is found plentifully in their woods, but perhaps growing in so much colder a climate, it may not possess the same powers. It is a gentle and agreeable stimulant.

XIII. *DIOSPY'ROS*, from Διός, Διος, Jupiter, and πρᾶ, a flame, from the Pear-like shape and excellence of the fruit. Nat. ord. *Linn.* Bicornes. *Juss.* Guai-eanæ. 18 Species.

1. *D. Lo'tus*. *Europæan Date Plum Tree*. "Leaves oblong, acuminate, downy beneath; buds internally hairy :" a small tree with spreading branches; flowers pale reddish, terminating, solitary, with a very large leafy calyx; berry round, yellow, the size of a cherry, sweet, with an astringent flavour. June, July. Italy. 1596. T.

2. *D. Virginia'na*. *Pishamin, or Persimon Plum*.

"Leaves ovate, bluntish, smooth, shining, netted with veins; foot-stalks downy; buds smooth :" a tree scarcely twenty feet high, dividing into many irregular branches, with a thin greenish bark; leaves many, broad, green; fruit like a Date, firm, sweet, much like those of the former species, but sweeter, not pleasant till mellowed by frost. June, July. North America. 1629. T.

The fruit of these trees never reaches any sort of perfection in England. The wood is very hard, and good for joiners' tools. One species, *D. Ebenum*, is found in the vast forests of Ceylon. The centre of the tree only is the well known and valuable black ebony, the outside wood being white and soft.

XIV. NYS'SA, because, says Linnæus, it grows in water; others say it is the name of a nymph. Nat. ord. *Linn.* Holoraceæ. Juss. Eleagni. 5 Species.

1. N. *Denticula'ta*. *Water Tupelo Tree*. "Leaves on long stalks, oblong, acuminate, remotely serrate, smooth; nuts oblong, grooved, somewhat wrinkled :" a tree from eighty to a hundred feet high, much branched towards the summit; leaves rather large, downy beneath; drupe resembling an olive; the wood bright and compact. May. North America. 1735. T.

2. N. *Biflo'ra*. *Mountain Tupelo, or Sour Gum*. "Leaves entire, ovate, oblong, acute, smooth; nut roundish, scored :" a tree thirty or forty feet high; branches many, horizontal; leaves dark green, shi-

ning above, lighter and hairy beneath ; flowers small, in axillary clusters ; drupe dark purple, the size of a small cherry ; wood hard, close grained. May. North America. 1739. T.

xv. **FRAX'INUS**, from *φράσινος*, to hedge in or enclose. Nat. ord. *Linn.* *Sepiariae.* *Juss.* *Jasmineæ.*
16 Species.

1. F. *Excel'sior*. *Common Ash*. "Leaves pinnate; leaflets slightly stalked, ovate, lanceolate, pointed, serrate; flowers without calyx or corolla :" a lofty tree; branches spreading, rather drooping; buds short, thick, black, downy; leaflets five or six pair; flowers greenish, inconspicuous, in panicles. Var. 1. *Weeping Ash*, with pendulous branches. 2. With leaves simple. April, May. Britain. T.

2. F. *Americana*. *White American Ash*. "Leaves pinnate; leaflets stalked, oblong, pointed, slightly serrate, glaucous beneath; capsules cylindrical at the base :" a tallish tree; calyx jagged, permanent; leaflets three or four pair, light green. May. North America. 1723. T.

3. F. *Or'nus*. *Flowering Ash, or Manna*. "Leaves pinnate; leaflets elliptic, oblong, pointed, bluntly serrate; flowers with a corolla :" a lofty tree; leaflets two or three pair, with an odd one, smooth, light green; panicles about the ends of the branches, axillary, many flowered; flowers whitish, light, delicate. May, June. Italy. 1710. T.

4. F. Rotundifo'lia. *Round-leaved or Manna Ash.*
“ Leaves pinnate; leaflets roundish, acute, sharply serrate; flowers with a corolla:” a tree under twenty feet in height; leaflets short, of a light green; flowers from the sides of the branches, of a purple colour, appearing before the leaves. April. Italy. 1697. T.

The peasants of Italy, after removing a portion of the bark, insert a tube into the trunk of the trees of the last two species, into this the sap distils: when it hardens it becomes the well known purgative drug Manna. The Common Ash is a handsome tree; the wood is much used by wheelwrights and other artificers, for various purposes, being hard and tough. The pendulous variety is often trained upon trellis-work, and forms a circular bower. Some North American species, not very well defined, are met with in catalogues, but as they are attended with much uncertainty, they have not been inserted.

xvi. GLEDIT'SCHIA, in honour of Dr. Gleditsch, a physician and botanist in Berlin, died 1786. Nat. ord. *Linn.* Lomentaceæ. *Juss.* Leguminosæ. 3 Species.

1. G. Triacan'thos. *Three thorned Acacia, or Honey Locust Tree.* “ Branches thorny; spines thick, three-fold; leaves twice pinnate; leaflets linear, oblong; legumes many seeded:” a tall, handsome tree; spines six or eight inches long; leaflets very numerous, smooth; flowers greenish, in axillary spikes; some leaves only simply pinnate. June, July. North America. 1700. T.

2. G. Monosperma. *Single seeded, or Water Acacia.* "Branches somewhat thorny; leaflets ovate, oblong, single seeded :" a tree scarcely differing from the last, except in its single seeded legume. June, July. North America. 1700. T.

3. G. Hor'rida. *Strong spined Acacia.* "Trunk thorny; spines branching; leaflets oval, oblong :" a tree with spines compound; leaves simple, and abruptly pinnate, of seven or eight pair of thin squarish leaflets, larger upwards, the terminal pair being often twice the dimensions of the rest. June, July. China. 1774. T.

These are handsome trees, bearing our climate very well, but are apt to have their branches broken by strong winds; the flowers being of an herbaceous colour, make no great appearance.

XVII. CERATO'NIA, from *κέρας*, a horn; alluding to the form of the legume. Nat. ord. *Lina*. Holopaceæ. Juss. Atriplices. 1 Species.

1. C. Si'liqua. *Carob Tree, or St. John's Bread.* An evergreen tree, of considerable size; trunk rugged; branches spreading, crooked; leaves winged; leaflets seven or eight pair, thick, rigid, nerved, dark green above, paler beneath; flowers small, dark purple; rarely appearing in England; legume four cornered, smooth, fleshy, many celled, sweetish. It was long supposed to be the food of John the Baptist in the wilderness: it is more probable that the shells of the

Careb Tree were the hawks intended in the parable of the Prodigal Son. This plant in our green-houses forms an agreeable variety with orange trees, myrtles, &c. September, October. The Levant. 1570. E. T.

XVIII. *Ficus*, from the Greek *φίκη*, the Fig Tree.

Nat. ord. *Linn.* Scabridæ. Juss. Urticæ. 73 Species.

1. *F. Carica*. Common Fig. "Leaves palmate, bluntish, wavy, or somewhat toothed, rough; fruit top-shaped, umbilical, smooth;" stem branched from the bottom, six to twenty feet high, with long twisted greyish branches; leaves deciduous, a span long, in three or five lobes, the central one largest, deep green; fruit with a three-leaved involucrum, stalked, purplish; its pulp soft, sweet, fragrant. June, July. South of Europe. 1548. T.

The Fig Tree, in its wild state, is an humble and distorted shrub. In England it is always planted against a wall; in warmer climates it is a standard tree. The varieties of the fruit are numerous: the remaining species of *Ficus* can only be preserved in England by the aid of the stove; several of them are very large trees, as *F. Sycomorus*, Pharaoh's Fig, which is the true Sycamore of the ancients, and not our great Maple; and *F. Indica*, which has been celebrated in India from the most remote antiquity, for its property of letting its branches droop and take root, so extending itself by this means, that a single tree forms a curiously arched grove: it has afforded to Milton an opportunity for one of the most delightful descriptions in the whole range of poetry. The Caprifica-

tion of the Fig has been practised in the Isles of the Levant from very early times; it is so called, from the fruit of the Wild Fig, *Caprificus*, being collected and suspended in bunches about the cultivated sort; these wild fruits were commonly male, and were found to be attended by certain winged insects of the genus *Cynips*, which by wounding the fruit, were supposed to promote its ripening. The sexualists maintain, that the use of the insect was to carry the pollen of the male to the female flower, the fruit which underwent this process being constantly found of superior quality. Figs never produce seed in England; and though in warmer climates they sometimes do, without the practice of caprification, yet, it may be observed, that the Fig is not entirely dioecious; some few stamens being generally found on the female plants.

CLASS XXIV.

CRYPTOGAMIA.

Order Filices.

i. **EQUISETUM.** Spike club-shaped; fructifications target-shaped, opening inwards; partial involucres tubular, of two valves; seeds numerous, naked, surrounded by four spiral stamens.

ii. **OPHIOGLOSSUM.** Capsules naked, united into a jointed two ranked spike, each rank of one cell and two valves, bursting transversely.

iii. **OSMUNDA.** Spike branched; capsules stalked, naked, globular, scored.

iv. **BOTRYCHIUM.** Spike-stalk compound, flattened; capsules adhering, naked, globular, smooth.

v. **POLYPODIUM.** Fructification in roundish scattered dots, without any involucre.

vi. **ASPIDIUM.** Fructification in roundish scattered dots; involucre umbilical, separating almost all round.

vii. **ONOCLEA.** Capsules densely covering the back of the frond; involucre from the closely reflexed marginal segments of the leaf.

viii. **ASPLENIUM.** Fructification in scattered lines, on the under surface of the frond; involucre bursting towards the rib.

ix. **SCOLOPENDRIUM.** Fructification in twin lines on the under surface of the frond between two veins; involucres originating from each vein, folding over each other, at length separating lengthwise.

x. **PTERIS.** Fructification in an uninterrupted marginal line; involucre bursting inwardly.

xi. **BLECHNUM.** Fructification in two lines, approaching the rib of the frond, and parallel; involucre bursting towards the rib.

xii. **ADIANTUM.** Fructification in marginal dots; involucre from the reflected border of the frond.

xiii. **HYMENOPHYLLUM.** Fructification on the margin of the leaf; involucre two valved, compressed, bursting outwardly.

Order Fungi.

xiv. **AGARICUS.** Pileus or Hat with gills underneath; gills differing in substance from the rest of the plant, composed of two lamina; seeds in the gills.

CLASS XXIV.

CRYPTOGAMIA.

Order Filices.

I. **EQUISÉTUM**, from *equus*, a horse, and *seta*, strong hair or bristle. Nat. ord. Linn. and Juss. **Filices**. 10 Species.

1. **E. Hyemale**. *Rough Horse Tail, Shave Grass.* "Stems simple, erect, naked, rough at the base, somewhat branched; sheaths white at the base, black at the apex, with imperfect teeth; spike terminating;" stem furrowed, sea green, a foot and half high; spikes brown, smallish. July, August. Britain. P.

This is a very natural genus, distinguished by its sheathed and jointed stalks. The various species flourish in watery situations; they are rarely cultivated. The Shave Grass is useful for polishing wood, ivory, and even brass; for this purpose large quantities are imported from Holland.

II. **OPHIOGLOSSUM**, from *ophis*, a serpent, and *γλώσσα*, a tongue; a name well adapted to the appearance of the plant. Nat. ord. Linn. and Juss. **Filices**. 10 Species.

1. **O. Vulgatum**. *Common Adder's Tongue.* "Spike from the stem; leaf ovate, obtuse, closely netted;" the plant a span high; green and smooth in every part, consisting of a simple round stem, bearing

one ovate leaf; stem terminated by a lanceolate narrow spike, of numerous capsules, full of small chaffy seeds. May, June. Britain. P.

III. OSMUN'DA, supposed to be in memory of some old botanist of the name of Osmund, whose history has not reached the present time. Nat. ord. Linn. and Juss. Filices. 6 Species.

1. O. Regalis. *Osmund Royal, or Flowering Fern.* "Frond doubly pinnate; leaflets somewhat heart-shaped at the base, the upper ones contracted, and covered with capsules:" an elegant fern, conspicuous for its Ash Tree like leaves; from two to four feet high, of a pleasant green; the upper wings change into clusters of capsules, and lose all appearance of foliage. July, August. Britain. P.

This is the largest and handsomest of our British Ferns; some American species have been introduced into Kew Gardens, where they still continue, but are scarcely to be found in England elsewhere.

IV. BOTRY'CHIUM, from *Corylus*, a bunch of grapes; which the fructification of the plant resembles in miniature. Nat. ord. Linn. and Juss. Filices. 10 Species.

1. B. Luna'ria. *Common Moon Wort.* "Frond simply pinnate; leaflets crescent-shaped," a fern about five inches high; from the base of the leaf springs a stout stalk, bearing a twice or thrice com-

pound smooth spike, much resembling that of Viper's Tongue. May, June. Britain. P.

v. **POLYPO'DIUM**, from πολύς, many, and πόδες, a foot; alluding to its scaly root creeping by numerous fibres or feet. Nat. ord. *Linn.* and *Juss.* Filices. **101 Species.**

1. *P. Vulga're. Common Polypody.* "Frond wing-cleft; its lobes oblong, obtuse, somewhat serrate; root scaly;" fronds erect, a span high, rather glaucous beneath, with large golden copious dots of capsules. May to October. Britain. P.

2. *P. Phogop'teris. Pale Mountain Polypody.* "Frond pinnate; leaflets lanceolate, pointed, wing-cleft, combined at the base, the lowermost pair deflexed;" fronds a foot high, pale green, with long pale stalks. June, July. Britain. P.

3. *P. Dryop'teris. Tender three-branched Polypody.* "Frond ternate, doubly pinnate, spreading, drooping; segments obtuse, somewhat crenate; root thread-shaped;" stalk smooth, a foot high, slender, delicate, bearing three elegantly drooping, tender, light green leaflets. June to September. Britain. P.

The root of the Common Polypody has been greatly celebrated for its effects upon the Tape Worm: this vermisuge power seems to have been known to the ancients, and has since been commended by various practical writers on medicine.

VI. **ASPIDIUM**, from *aspidos*, a small shield; descriptive of the shape of the involucre. Nat. ord. Linn. and Juss. Filices.

1. A. *Lonchitis*. *Rough Alpine Shield Fern*. "Frond pinnate, chaffy; leaflets sickle-shaped, declining, acute, with fringe-like serratures;" fronds a span high, growing erect, lanceolate, rather narrow; leaflets numerous, crowded, about one-third of them seed bearing. May to August. Britain. P.

2. A. *Aculeatum*. *Common Prickly Shield Fern*. "Frond doubly pinnate; leaflets ovate, somewhat falcate, stalked, with prickly serratures, hairy beneath; common stalks and ribs scaly; involucre peltate, entire;" fronds two or three feet high, spreading in a circular manner, paler beneath; involucre pale brown. June to August. Britain. P.

3. A. *Filix Mas*. *Male Shield Fern*. "Frond doubly pinnate; leaflets oblong, obtuse, sessile, sharply serrate, without prickles, uniform; masses of capsules crowded towards the rib and base of each leaflet; involucre orbicular;" fronds numerous, bright green, about a yard high; fructification abundant, of a rich tawny brown. The root is applied to the same purposes as that of the Common Polypody. June to August. Britain. P.

4. A. *Filix Fœmina*. *Female Shield Fern*. "Frond doubly pinnate; leaflets wing-cleft, serrate, pointless, oblong, lanceolate; stalk smooth; dots oblong; in-

volucrē kidney-shaped ;" frond from one to two feet high, of a fine dark green; stalk smooth, pale; leaflets very numerous, delicately cut; capsules dark brown; an elegant fern. The names male and female have nothing to do with the sex of the plants, but were imposed from their relative size. June to September. Britain. P.

5. A. *Marginalis*. *Marginal flowering Shield Fern*. " Frond doubly pinnate; leaflets oblong, obtuse, decurrent, crenate, almost wing-cleft at the base; masses of capsules marginal; involucre orbicular;" upper half of the frond only capsule bearing. June to September. North America. 1772. P.

6. A. *Bulbi'ferum*. *Bulbiferous Shield Fern*. " Frond doubly pinnate, oblong, lanceolate; leaflets ovate, obtuse, wing-cleft, or deeply serrate, upper ones confluent; ribs bearing fleshy bulbs," which fall off and become young plants; frond about eighteen inches high, bright green, delicately cut. July, August. Canada. 1638. P.

VII. **ONO'CLEA**, from ονος, a sort of vessel, and κλεω, to shut up. Nat. ord. Linn. and Juss. Filices. 3 Species.

1. O. *Sensi'bilis*. *Sensitive Fern or Onoclea*. " Barren fronds pinnate; leaflets decurrent, sinuated, the upper ones confluent;" fronds from one and a half to two feet high, on long smooth stalks; the leaflets thin, pale green, delicate, so tender, that on being touched

they wither; leaflets of the fertile fronds resembling a crowded spike of capsules. August. Virginia. 1699. P.

2. O. Struthiopteris. *Bird's Nest, or Russian Onoclea.* "Barren fronds pinnate, leaflets sessile, wing cleft; segments rather acute, regular in length;" a noble fern, three or four feet high; fronds growing in a circle, forming a sort of nest for birds. July, August. Europe. 1700. P.

VIII. ASPLENIUM, from a privative, and σπλήν, the spleen; because it is said to dry up that organ. Nat. ord. Lian. and Junc. Filices. 47 Species.

1. A. Trichomanes. *Common Maidenhair Spleen Wort.* "Frond pinnate; leaflets ovate, roundish, crenate; spike-stalk smooth, shining, keeled beneath;" fronds six inches high; stalk glossy purple; leaflets fifteen or twenty pairs. May to October. Britain. P.

2. A. Viride. *Green Maidenhair Spleen Wort.* "Frond pinnate; leaflets alternate, elliptic, roundish, crenate; spike-stalk flattened beneath," of a paler colour than that of the last, of which it is thought by some only a variety; leaflets somewhat rhomb-shaped. June to September. Britain P.

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or four inches high; fructification appearing in two or three white dots on each side of the nerve of the frond. June to October. Britain. P.

4. A. Adian'tum Ni'grum. *Black Maidenhair, Spleen Wort.* "Fronds somewhat thrice pinnate; leaflets alternate, lanceolate, acute, cut, serrate;" fronds eight or nine inches high; stalks dark coloured; fructification in oblique lines. April to October. Britain. P.

These pretty Ferns are well adapted for ornamenting rock-work. A syrup prepared from the root of the first species is often used in pectoral complaints: in the composition called Capillaire, the roots of several of these Ferns are an ingredient.

IX. SCOLOPEN'DRIUM, from a supposed resemblance of the long fibrous roots to the insect Scolopendra or Centipes. Nat. ord. *Linn.* and *Juss.* Filices. 3 Species.

1. S. Vulga're. *Common Hart's Tongue.* "Frond simple, tongue-shaped; heart-shaped at the base, smooth at the back;" fronds numerous, erect, twelve or eighteen inches high, grass green, lanceolate, waved; capsules innumerable, stalked, globose: it is subject to some varieties in its growth and leaves; whence the names of Curled-leaved, Wave-leaved, and Clustered Hart's Tongue. July, August. Britain. P.

2. S. Ce'terach. *Common Scaly Spleen Wort.* "Fronds wing-cleft, lanceolate, scaly at the back,"

numerous, from four to ten inches high, smooth, rather glaucous above, covered beneath with innumerable lax brown scales, which conceal the lines of the capsules. May to October. Britain. P.

Both these plants were formerly recommended in various real or supposed disorders of the spleen, and also as a pectoral and aperient; but they are entirely discarded from modern practice.

Pteris, from πτερόν, a wing; alluding to its wing-like leaves. Nat. ord. Linn. and Juss. Filices. 108 Species.

1. **P. Aquilina.** *Common Brake.* "Frond in three cleft divisions; branches doubly pinnate; leaflets crowded, lanceolate, acute, the upper ones confluent;" fronds from two to five feet high, rigid, harsh, light green; in cutting the stem obliquely through, a figure somewhat like the Austrian eagle is seen, whence its specific name. July, August. Britain. P.

2. **P. Atro-purpurea.** *Purple Brake.* "Frond pinnate; lower leaflets ternate or pinnate, lanceolate, obtuse, somewhat heart-shaped at the base;" fronds deep green; stalk polished; bark purplish black. August to November. North America. 1770. P.

3. **P. Crisp'a.** *Rock Brake, or Curled Stone Fern.* "Fronds repeatedly compound; barren leaflets, wedge-shaped, cut at the extremity, fertile ones el-

liptic, obtuse, convex;" fronds many together in tufts, from six to twelve inches high, of a pale green. July, August. Britain. P.

XI. BLECH'NUM, $\beta\lambda\eta\chi\rho\nu$, the name of some brake in Pliny; the derivation of the word is unknown. Nat. ord. Linn. and Juss. 7 Species.

1. B. Boreale. *Rough Spleen Wort, Osmunda Spicant.* "Frond pinnate, smooth; leaflets linear, obtuse, entire, equal at the base;" frond a foot and a half high; flowering fronds narrower than the barren ones, much taller; plant dark green. July. Britain. P.

XII. ADIAN'TUM, from α privative, and $\delta\alpha\mu\nu\omega$, to moisten; it repelling water. Nat. ord. Linn. and Juss. Filices. 44 Species.

1. A. Capill'us Ve'neris. *True Maidenhair.* "Frond doubly compound; wings alternate; leaflets wedge-shaped, lobed, on short stalks;" a plant five or six inches high; leaflets with four or five clefts at the end, of a delicate semi-transparent green. May to September. Britain. P.

2. A. Peda'tum. *Canadian Maidenhair.* "Frond pedate; branches pinnate; leaflets oblong, crescent-shaped, cut in the margin; barren segments toothed, fertile ones entire;" a plant about eighteen inches high; stalks purple; root small. August, September. Canada. 1640. P.

The roots of these plants, like those of some species of *Asplenium*, are used in forming Capillaire; mixed up with orange-flower water, they make a pleasant pectoral syrup.

XIII. HYMENOPHYL'LUM, from *υμένος*, a film or membrane, and *φύλλον*, a leaf; the foliage being remarkable for its filmy texture. Nat. ord. *Linn.* and *Juss.* Filices. 2 Species.

1. H. Tunbridgen'se. *Tunbridge Filmy Leaf.* "Fronds alternately twice pinnate, decurrent, sharply serrate, as well as the involucre; fructifications solitary at the upper end of the base of each division of the frond;" fronds numerous, upright, membranous, pellucid; leaflets elliptic, narrow. May and June. Britain. P.

Order Fungi.

XIV. AGA'RICUS, from *Agaria*, a city, or *Agarus*, a river of Sarmatia. Nat. ord. *Linn.* and *Juss.* Fungi. 684 Species, *Micheli.*

1. A. Campes'tris. *Common Mushroom.* "Gills pinky, changing to a dark liver colour, crowded, irregular; pileus convex, white or brown; stem white, cylindrical, curtain white:" plant varying very much in size, from an inch to a foot in diameter. August to September. Britain.

This species is esteemed the best and most savoury of the genus, and is in much request for the table: it is

aten fresh, either stewed or broiled, and preserved either as a pickle or in powder. The sauce called Ketchup is made from its juice, with salt and spices. The wild Mushrooms are more delicate than those which are raised on artificial beds; the flesh of the latter being less tender. **Buttons** are the Mushrooms in their young state, before that part of the fungus termed the curtain is ruptured. Of this vast genus, the *Agaricus Campestris* is the only species which is cultivated; in Miller's Dictionary it is called Common Mushroom or *Champignon*; but gardeners and cooks apply the latter name to a smaller sort, *A. Or- cades*, which grows in fairy rings, and which is called by Ray Scotch Bonnets. Some few other species of *Agaricus* are eatable, but the larger part are esteemed dangerous. *A. Deliciosus* is a small Mushroom, rare in England, but commonly brought to the markets in Italy; it is somewhat orange-coloured, and is supposed to have been the *Boletus* in which the poison was conveyed to Claudius Cæsar by his wife Agrippina. *Morel* is the *Phallus Es- culentus* of Linnæus, about the size of an egg, of a cellular texture; it is readily dried. *Truffle* is the *Tuber Cibarium*, of a darkish colour, about the size of a walnut, and which grows four or five inches below the surface of the ground: dogs taught to scent it, will bark, and begin to scratch the earth; pigs also in Italy will root it up, and then an attendant takes it from them. These Fungi are in high esteem at the tables of the opulent, for imparting an exquisite flavour to various sorts of made dishes.



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